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FEDERAL - STATE - PRIVATE
COOPERATIVE SNOW SURVEYS

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CURRENT SERIAL RECORDS

WATER SUPPLY OUTLOOK and FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS for OREGON

UNITED STATES DEPARTMENT of AGRICULTURE...SOIL CONSERVATION SERVICE
and
OREGON STATE UNIVERSITY
and
STATE ENGINEER of OREGON

Data included in this report were obtained by the agencies named above
in cooperation with other Federal, State and private organizations.

||||||| AS OF |||||||
FEB. 1, 1966

UNITED STATES DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

To Recipients of Water Supply Outlook Reports:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season as they affect runoff will add to be an effective average. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1400 snow courses in Western United States and in the Columbia Basin in British Columbia. In the near future, it is anticipated that automatic snow water equivalent sensing devices along with radio telemetry will provide a continuous record of snow water equivalent at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data or reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

Listed below are water supply outlook reports based on Federal-State-Private Cooperative snow surveys. Those published by the Soil Conservation Service may be obtained from Soil Conservation Service, Room 507, Federal Building, 701 N. W. Glisan, Portland, Oregon 97209.

PUBLISHED BY SOIL CONSERVATION SERVICE

<u>REPORTS</u>	<u>ISSUED</u>	<u>LOCATION</u>	<u>COOPERATING WITH</u>
RIVER BASINS			
WESTERN UNITED STATES _____	MONTHLY (FEB.-MAY) _____	PORTLAND, OREGON _____	ALL COOPERATORS
BASIC DATA SUMMARY _____	OCTOBER 1 _____	PORTLAND, OREGON _____	ALL COOPERATORS
STATES			
ALASKA _____	MONTHLY (MAR.-MAY) _____	PALMER, ALASKA _____	ALASKA S.C.D.
ARIZONA _____	SEMI-MONTHLY _____ (JAN.15 - APR.1)	PHOENIX, ARIZONA _____	SALT R. VALLEY WATER USERS ASSOC. ARIZ. AGR. EXP. STATION
GOLORADO AND NEW MEXICO _____	MONTHLY (FEB.-MAY) _____	FORT COLLINS, COLORADO _____	COLO. STATE UNIVERSITY COLO. STATE ENGINEER N. MEX. STATE ENGINEER
IDAHO _____	MONTHLY (JAN.-JUNE) _____	BOISE, IDAHO _____	IDAHO STATE RECLAMATION ENGINEER
MONTANA _____	MONTHLY (JAN.-JUNE) _____	BOZEMAN, MONTANA _____	MONT. AGR. EXP. STATION
NEVADA _____	MONTHLY (JAN.-MAY) _____	RENO, NEVADA _____	NEVADA DEPT. OF CONSERVATION AND NATURAL RESOURCES - DIVISION OF WATER RESOURCES
OREGON _____	MONTHLY (JAN.-JUNE) _____	PORTLAND, OREGON _____	OREG. STATE UNIVERSITY OREGON STATE ENGINEER
UTAH _____	MONTHLY (JAN.-JUNE) _____	SALT LAKE CITY, UTAH _____	UTAH STATE ENGINEER
WASHINGTON _____	MONTHLY (FEB.-JUNE) _____	SPOKANE, WASHINGTON _____	WN. STATE DEPT. OF CONSERVATION
WYOMING _____	MONTHLY (FEB.-JUNE) _____	CASPER, WYOMING _____	WYOMING STATE ENGINEER

PUBLISHED BY OTHER AGENCIES

<u>REPORTS</u>	<u>ISSUED</u>	<u>AGENCY</u>
BRITISH COLUMBIA _____	MONTHLY (FEB.-JUNE) _____	WATER RESOURCES SERVICE, DEPT. OF LANDS, FOREST AND WATER RESOURCES, PARLIAMENT BLDG., VICTORIA, B.C., CANADA
CALIFORNIA _____	MONTHLY (FEB.-MAY) _____	CALIF. DEPT. OF WATER RESOURCES, P.O. BOX 388, SACRAMENTO, CALIF.

WATER SUPPLY OUTLOOK
and
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS
for
OREGON

ISSUED

FEBRUARY 8, 1966

Report prepared by

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and

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STATE OF OREGON

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CONTENTS

Original Articles
The Effect of the Diet on the Blood Pressure in the Normal Adult
The Effect of the Diet on the Blood Pressure in the Normal Adult
The Effect of the Diet on the Blood Pressure in the Normal Adult

Editorial

Announcements

Correspondence

Obituary

Index

Subject Index

Author Index

Table of Contents

Table of Contents

Table of Contents

Table of Contents

Table of Contents

Table of Contents

Table of Contents

Table of Contents

Table of Contents

Table of Contents

Table of Contents

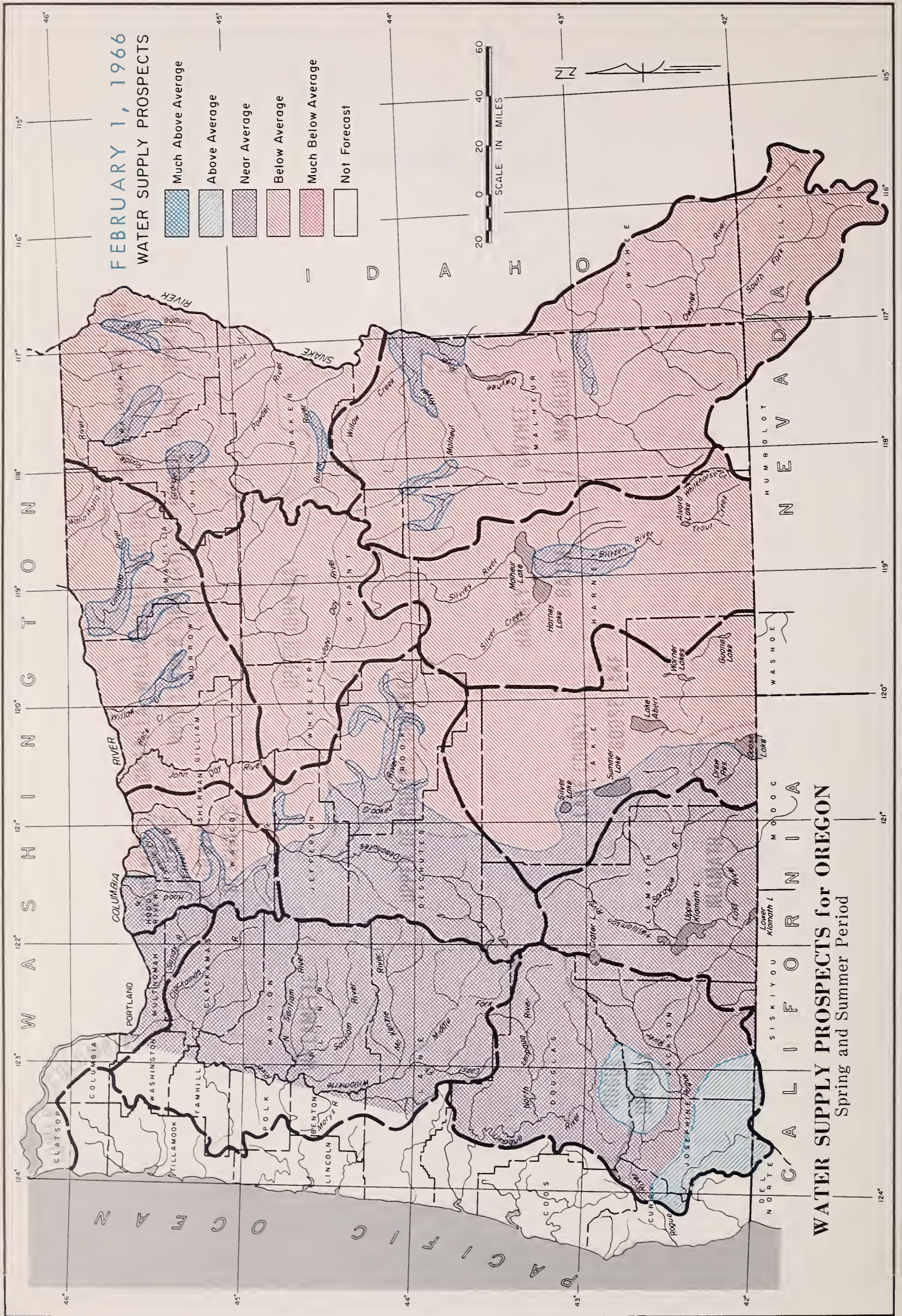
Table of Contents

TABLE OF CONTENTS

	PAGE
WATER SUPPLY PROSPECTS FOR OREGON.....(MAP).....	FACING PAGE 1
WATER SUPPLY OUTLOOK FOR OREGON.....	1
STORAGE STATUS OF OREGON RESERVOIRS.....(MAP).....	3
SNOW WATER ACCUMULATION - OREGON CASCADES.....	4
SNOW WATER ACCUMULATION - EASTERN OREGON.....	5
MOUNTAIN SOIL MOISTURE IN OREGON.....(MAP).....	6
VALLEY PRECIPITATION IN OREGON.....(MAP AND TABLE).....	7
CURRENT OREGON STREAMFLOW.....(GRAPH).....	8

DETAILED WATER SUPPLY OUTLOOK BY MAJOR WATERSHED AREAS

OWYHEE, MALHEUR.....	AREA 1
BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA.....	AREA 2
UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY.....	AREA 3
UPPER JOHN DAY.....	AREA 4
UPPER DESCHUTES, CROOKED.....	AREA 5
HOOD, MILE CREEKS, LOWER DESCHUTES.....	AREA 6
LOWER COLUMBIA.....	AREA 7
WILLAMETTE.....	AREA 8
ROGUE, UMPQUA.....	AREA 9
KLAMATH.....	AREA 10
LAKE COUNTY, GOOSE LAKE.....	AREA 11
HARNEY BASIN.....	AREA 12
MAP AND INDEX OF OREGON SNOW COURSES.....(MAP)	
LIST OF COOPERATORS.....	INSIDE BACK COVER



WATER SUPPLY OUTLOOK for OREGON

FEBRUARY 1, 1966

Outlook for spring and summer water supplies in Oregon in 1966 varies from good in the western third of the state to fair over most of eastern Oregon. However, late season water supplies may be poor in some scattered parts of Harney Basin, the Malheur and the Owyhee except where stored water supplies "will save the day."

SNOW COVER

Water content of the mountain snowpack is about 130 percent of the 15-year (1948-62) average in western Oregon and diminishes in an easterly direction to about 100 percent in midstate and drops to a low of 60 percent average on the Malheur watersheds. Harney Basin and the Owyhee are also very short of snow.

SOIL MOISTURE

Moisture in the soil mantle under the snowpack is much poorer than last year but is close to average except on the Powder River, Burnt, John Day, Silvies and Lake County watersheds where it ranges between lows of 62 and 69 percent of capacity. These drier soils will soak up some of the early snowmelt water.

RESERVOIR STORAGE

Water stored in 25 Oregon reservoirs, used primarily for irrigation, totals 126 percent of the 15-year (1948-62) average and 77 percent of last year at this date. Stored water supplies are highly favorable except at Cold Springs and McKay on the Umatilla where inflow is greatly reduced by relatively dry watersheds.

STREAMFLOW

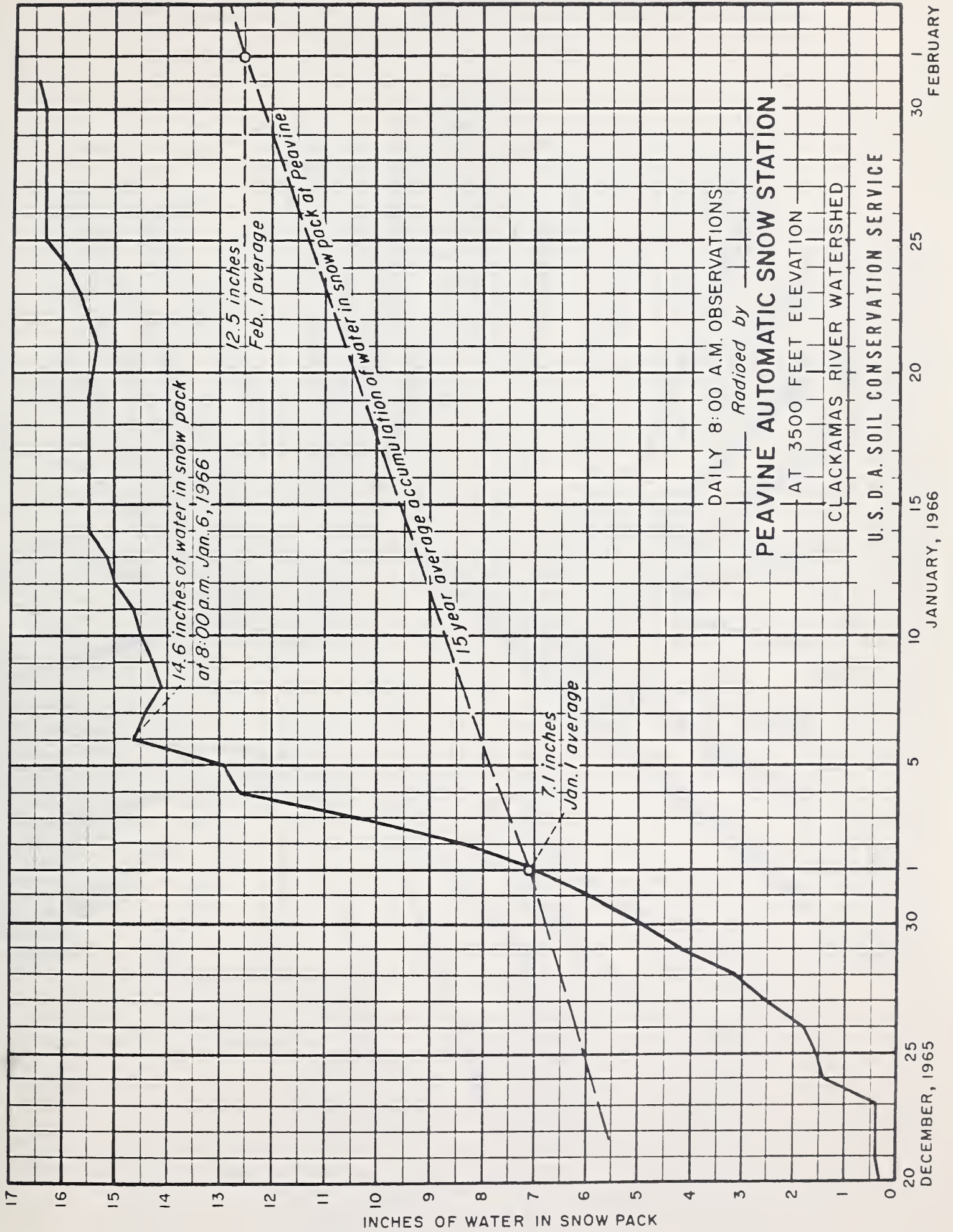
Flow of Oregon streams next spring and summer (April through September) is forecast to range downward from near average in the western third of the state to lows of 50 and 60 percent average on the Owyhee, Malheur, Burnt, Powder and Silvies Rivers. Stored water supplies will provide adequate water for average irrigation needs in many of the areas of "short" streamflow.

Preliminary figures of streamflow* on key Oregon streams for the 4 months since October 1, 1965 range from highs of 97 and 94 percent average on the Owyhee and Klamath to lows of 59 percent on the Middle Fork of the Willamette, 52 percent on the John Day and about 22 percent average on the Grande Ronde.

* Preliminary data from U. S. Geological Survey; Oregon State Engineer; Pacific Power and Light Company, Portland, and North Board of Control, Nyssa.



DAILY RADIO REPORTS BY AUTOMATIC SNOW MEASURING STATION

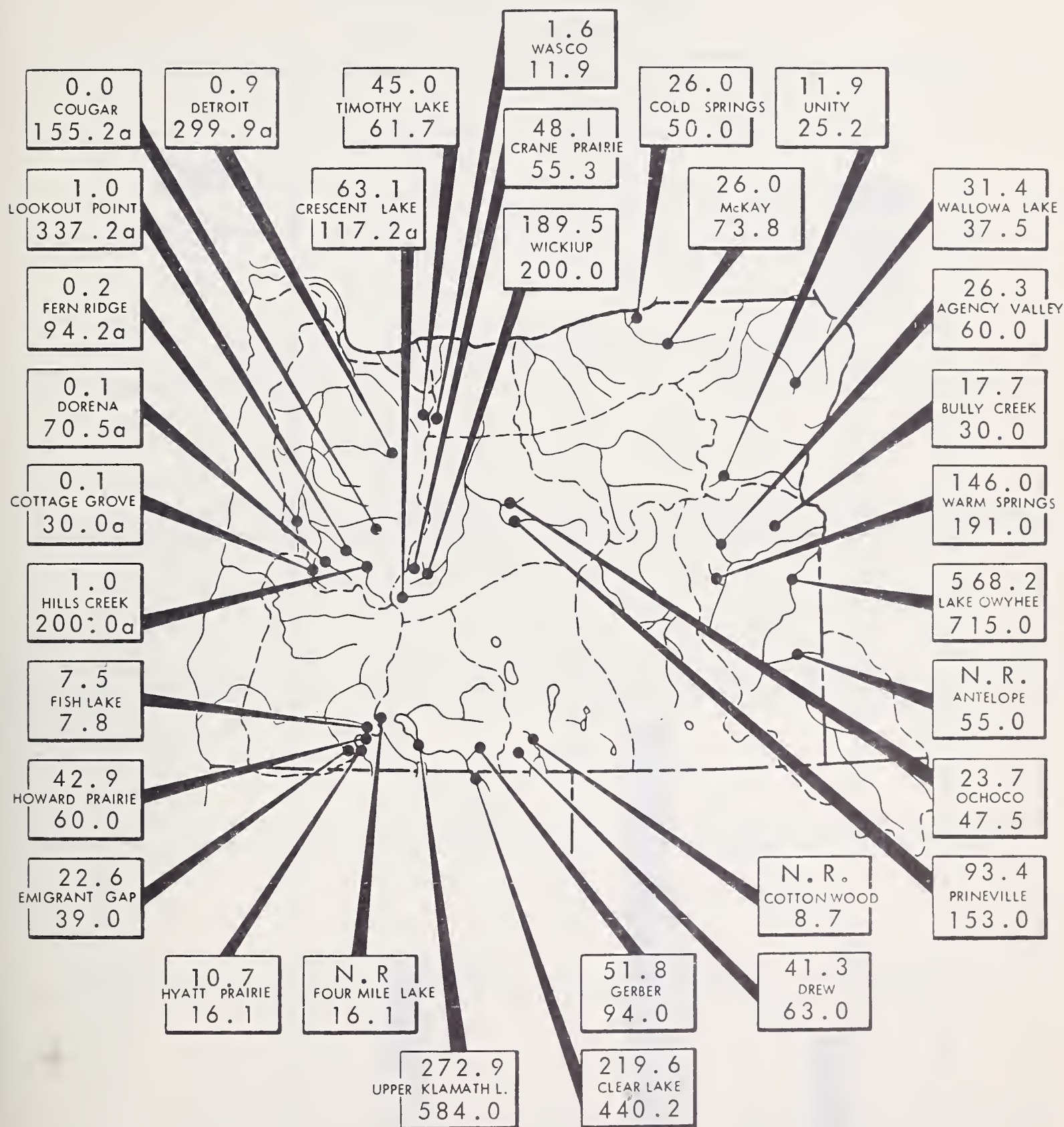




STORAGE STATUS of OREGON RESERVOIRS

usable contents in thousands of acre feet

FEBRUARY 1, 1966



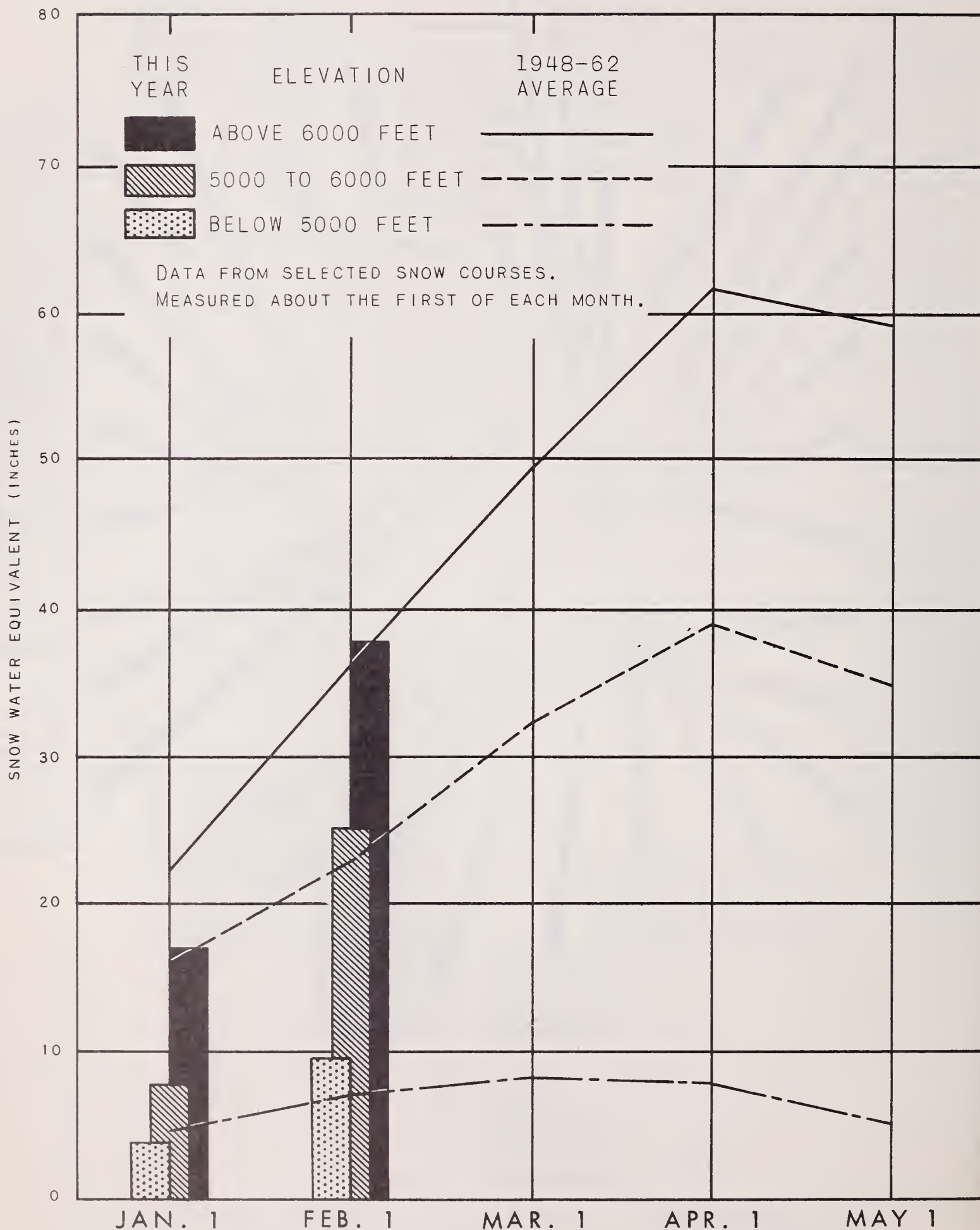
EXPLANATION

687.0 ---Contents
LAKE OWYHEE
715.0 ---Capacity

(a) Multiple purpose reservoir - space reserved for flood runoff.
N. R. - No report.

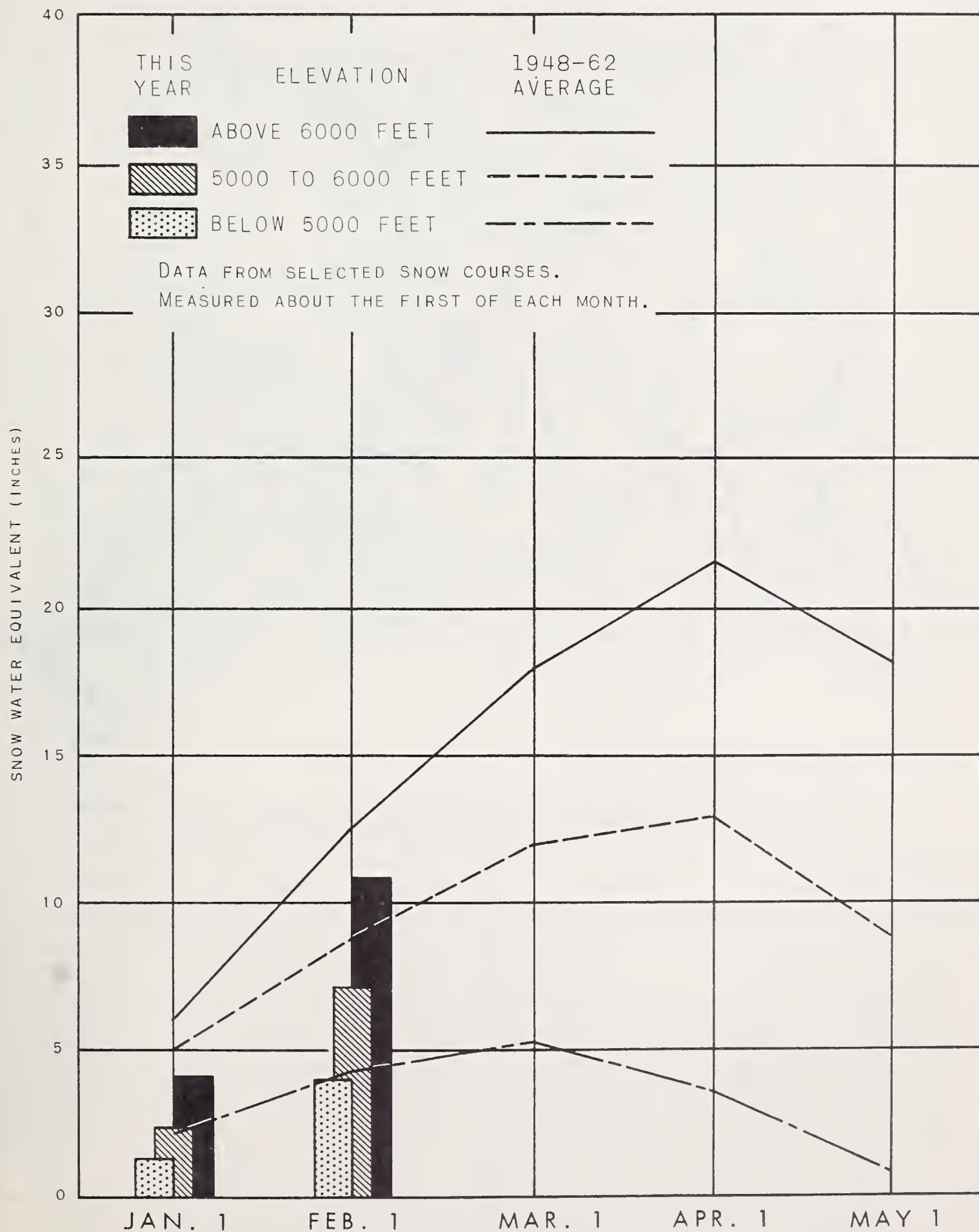
SNOW WATER ACCUMULATION IN OREGON CASCADES

FEBRUARY 1, 1966



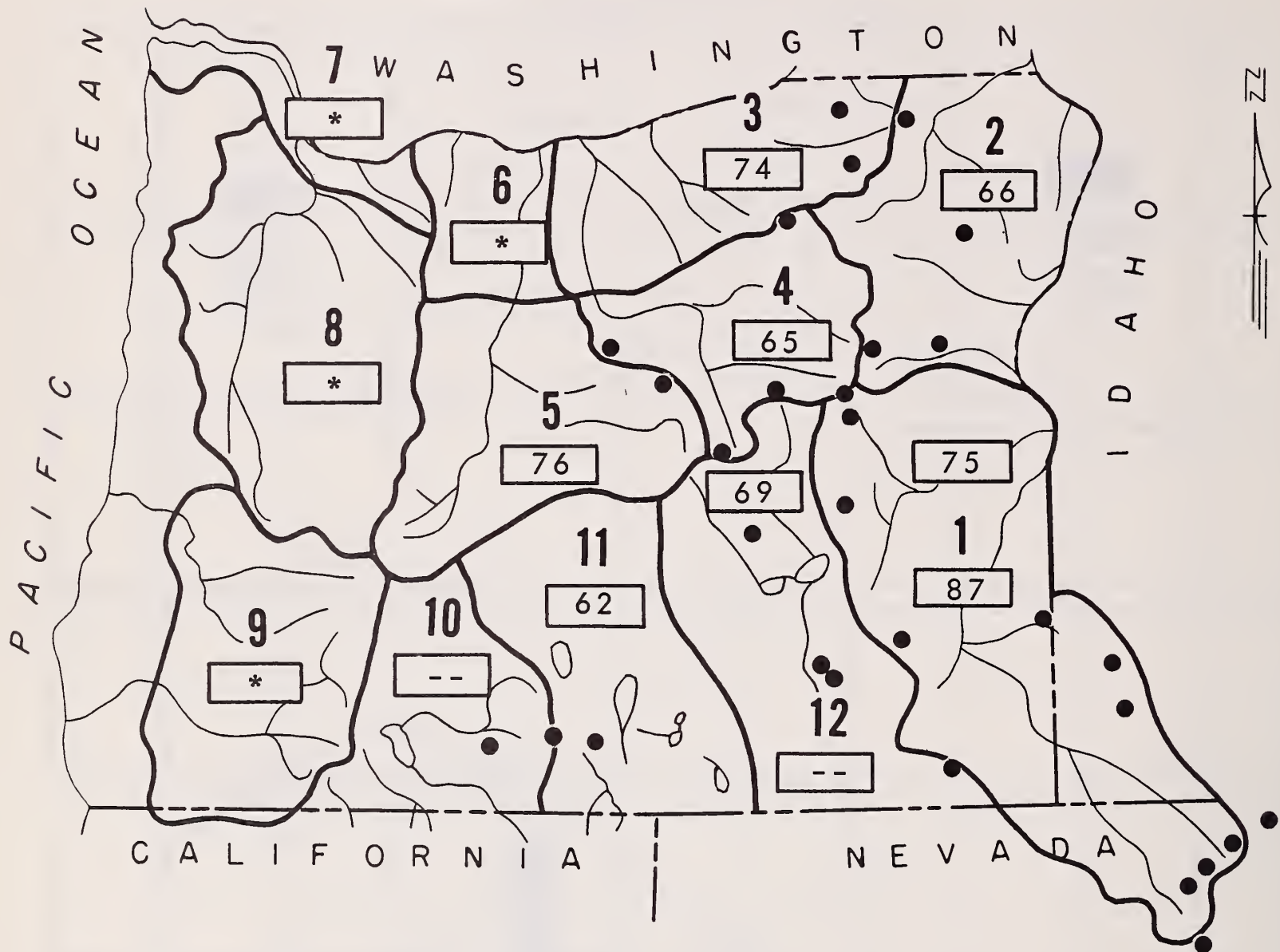
SNOW WATER ACCUMULATION IN EASTERN OREGON

FEBRUARY 1, 1966



MOUNTAIN SOIL MOISTURE in OREGON as percent of capacity

FEBRUARY 1, 1966



● Soil Moisture Station

**Moisture studies not yet developed in these areas.*

VALLEY PRECIPITATION in OREGON^a

FEBRUARY 1, 1966



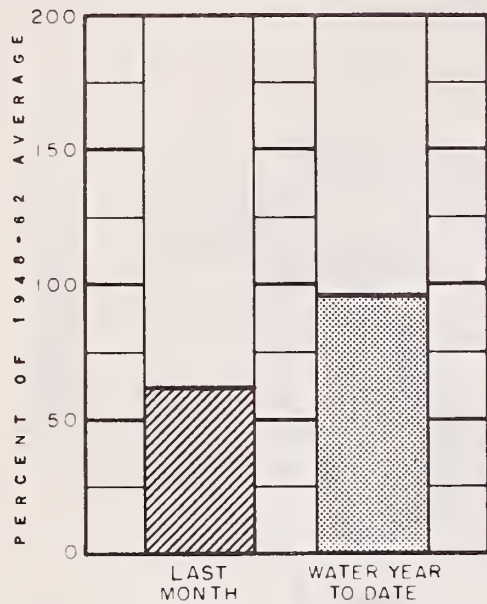
PRECIPITATION as PERCENT of the 1948-62 AVERAGE

PRECIPITATION as PERCENT of the 1948-62 AVERAGE					
STATION	LAST MONTH	WATER YEAR ^b TO DATE	STATION	LAST MONTH	WATER YEAR ^b TO DATE
BAKER APT.	68	53	LAKEVIEW	89	85
BEND	177	108	MEACHAM	110	59
BURNS	50	68	MEDFORD APT.	139	101
ENTERPRISE	76	43	NYSSA	27	74
EUGENE APT.	147	116	PENDLETON APT.	140	81
HEPPNER	107	68	PORTLAND APT.	94	108
JOHN DAY	73	57	SALEM APT.	91	100
KLAMATH FALLS APT.	80	83	THE DALLES	123	80
			OWYHEE (NEV.)	83	92

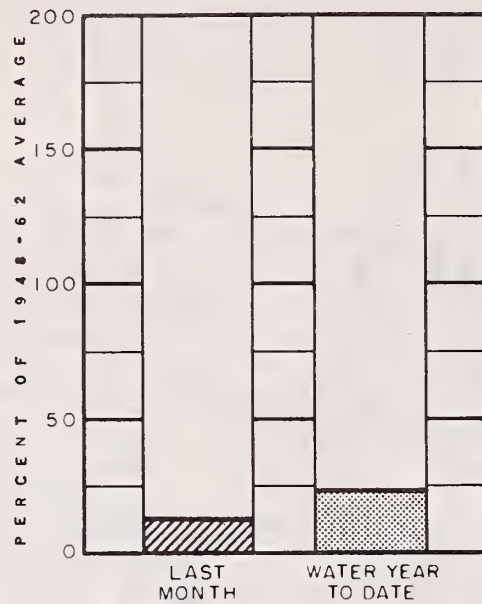
(a) Preliminary data furnished by the U.S. Weather Bureau. (b) Oct. 1 to date. (c) Report delayed.

CURRENT OREGON STREAMFLOW

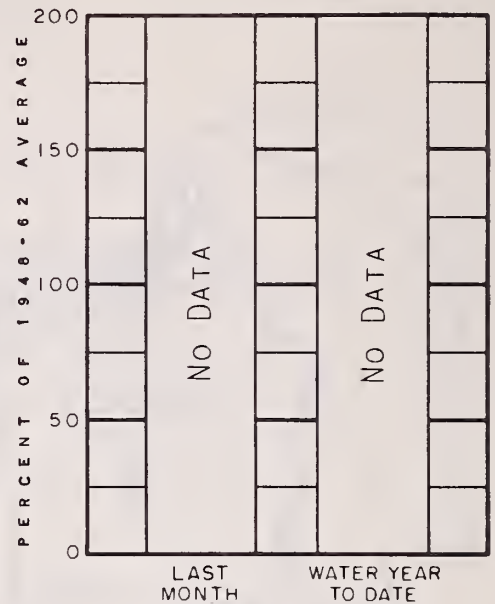
FEBRUARY 1, 1966



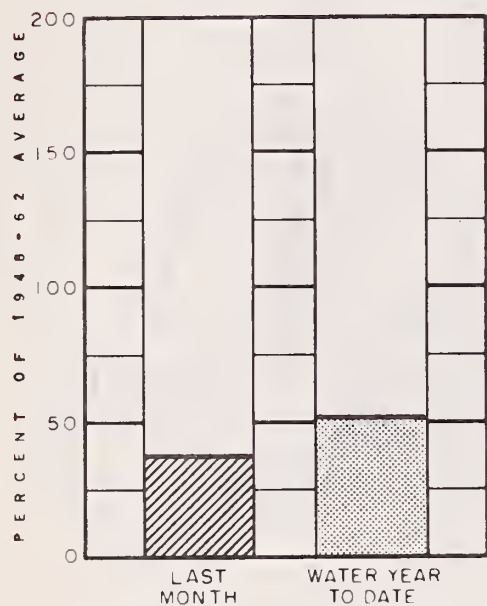
Owyhee Lake net inflow



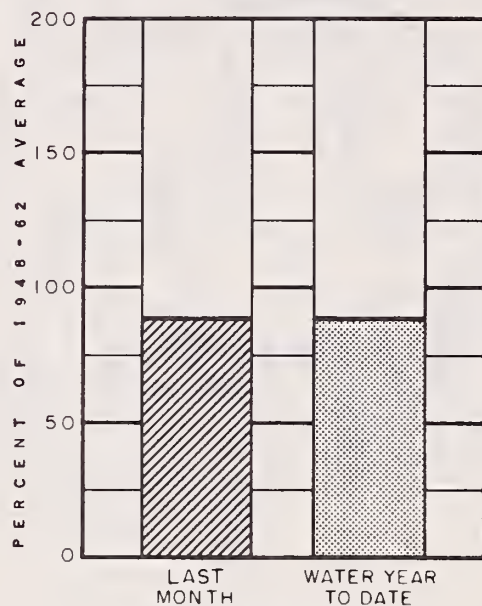
Grande Ronde at La Grande



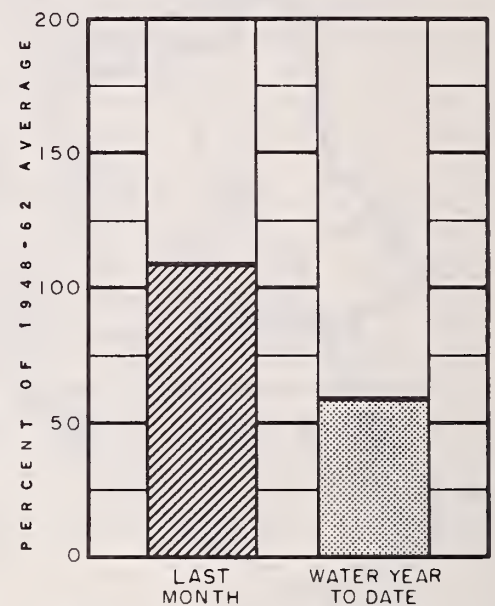
Umatilla at Pendleton



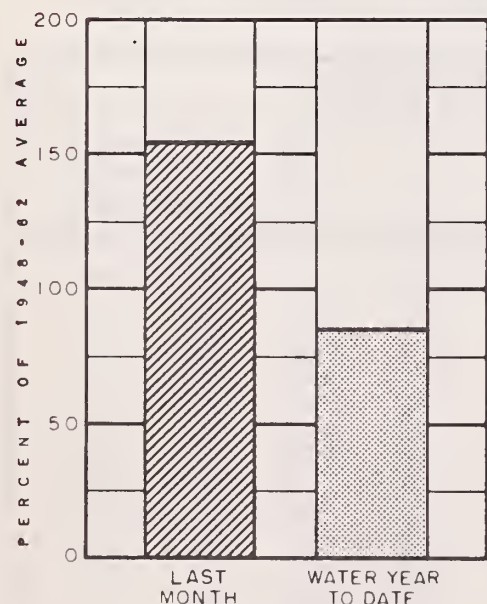
John Day at Service Creek



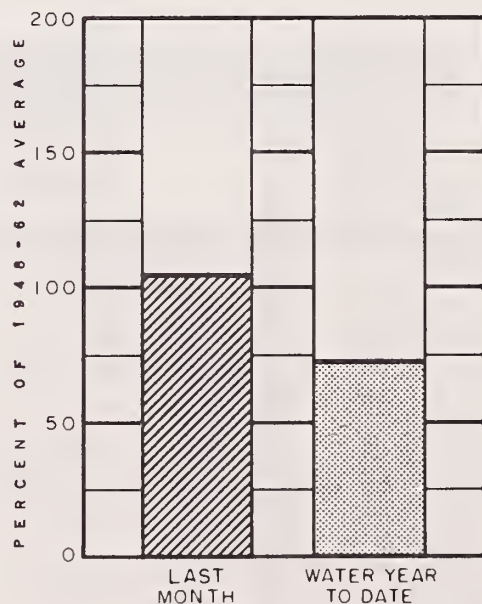
Deschutes at Moody



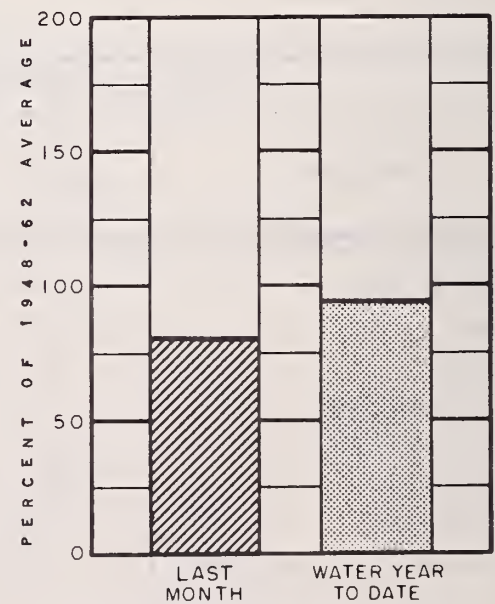
Mid. Fk. Willamette below No. Fk.



Umpqua near Elkton



Rogue at Raygold



Upper Klamath Lake net inflow

Data furnished by U.S. Geological Survey; The Pacific Power and Light Co.;
and North and South Boards of Control Owyhee Project.

WATER SUPPLY OUTLOOK OWYHEE, MALHEUR WATERSHEDS OREGON

as of

FEBRUARY 1, 1966

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

Water outlook in Malheur County has dimmed considerably with recent storms bringing very little new moisture. Reservoired water supplies are good but lands served directly from streamflow will likely have much less than average water for irrigation.

SNOW COVER

Water content of the mountain snowpack is about 66 percent of the 15-year average (1948-62) on the Owyhee and 60 percent on the Malheur watersheds. The total snow cover is less than half that of last year at this midwinter date.

SOIL MOISTURE

Watershed soils under the snowpack are wet up to 75 percent of capacity on the Malheur and 87 percent on the Owyhee. Moisture is from 10 to 13 percent less than last year. Some watershed soils are still frozen under the snow.

RESERVOIR STORAGE

Warm Springs reservoir now holds 146,000 acre feet of water compared with 124,700 acre feet a year ago. In Agency Valley there is 26,300 acre feet compared with 53,500 acre feet last year. Bully Creek reservoir has 17,700 acre feet compared with 28,200 acre feet a year ago. A total of 190,000 acre feet of reservoired water is available compared with 206,000 acre feet last year and an average storage of about 85,000 acre feet.

Owyhee reservoir, with 568,200 acre feet now held, is short of the 666,000 acre feet held last year but well ahead of the 345,500 acre feet usually held on February 1.

STREAMFLOW

Forecasts of expected streamflow in Malheur County for the April-September period range from 51 percent of the 15-year average for the Malheur near Drewsey, through 57 percent average for North Fork of Malheur to 59 percent average for inflow to Lake Owyhee. The March-July flow of Jordan Creek is forecast at 50 percent of the average.

Flow of many small streams heading in lower elevations will be much below average.

Flow of the Owyhee* during January was only 62 percent average.

*Preliminary data furnished by North Board of Control at Nyssa, Oregon.

WATER SUPPLY OUTLOOK

expressed as "Poor", "Fair",
"Average" or "Excellent"

RESERVOIR STORAGE (1,000 Ac. Ft.) February 1, 1966

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Boulder Creek	Fair	Poor
Bully Creek	Fair	Poor
Cow Creek	Fair	Poor
Jordan Creek	Fair	Poor
Jordan Valley Irrig. Dist.	Average	Fair
McDermitt Creek	Fair	Poor
Oregon Canyon Creek	Fair	Poor
Owyhee Project	Average	Average
Succor Creek	Fair	Poor
Tenmile Creek	Fair	Poor
Vale-Oregon Irrig. Dist.	Average	Average
Warm Springs Irrig. Dist.	Average	Average
Willow Creek (Reservoired)	Average	Fair

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1948-62 AVERAGE
Agency Valley	60.0	26.3	53.5	21.8
Antelope	55.0	b	19.2	5.9
Bully Creek	30.0	17.7	28.2	- -
Owyhee	715.0	568.2	666.2	345.5
Warm Springs	191.0	146.0	124.7	52.5

STREAMFLOW FORECASTS^a(1,000 Ac. Ft.) as of February 1, 1966

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT. OF AVERAGE ⁱ
NO.	NAME				
1780	Jordan Creek above Lone Tree Creek	58	March-July	117	50
2140	Malheur near Drewsey	68	Feb.-July	122	56
		42	April-Sept.	82	51
2175	Malheur, North Fork at Beulah ^d	52	Feb.-July	79	65
		37	April-Sept.	65	57
1825	Owyhee Reservoir net Inflow ^k	275	Feb.-July	533	52
		225	April-Sept.	381	59

SOIL MOISTURE

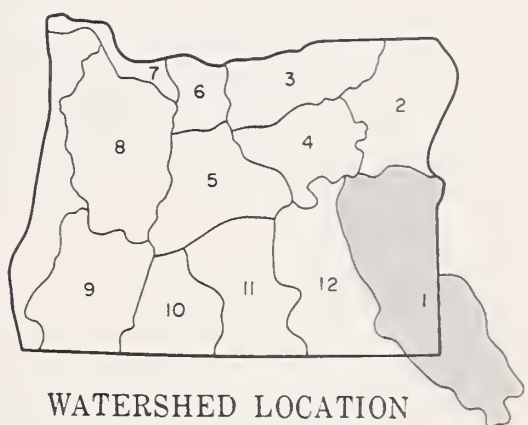
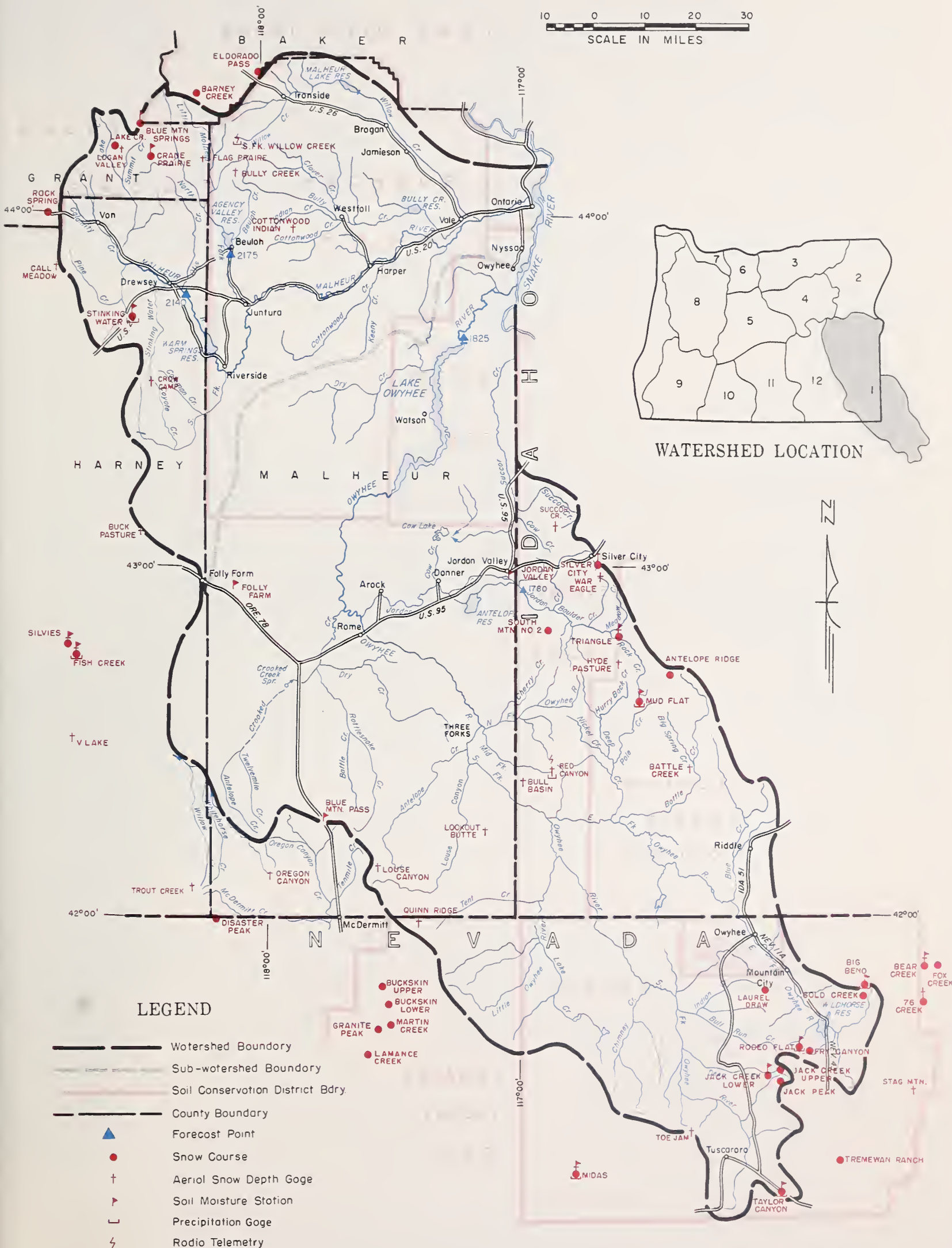
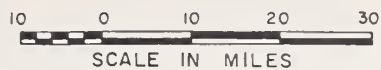
STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
		DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
NAME	ELEVATION						
Bear Creek (Nev.)	7800	72	16.8	c			
Big Bend (Nev.)	6700	48	16.7	1-31-66	14.9	16.5	15.6
Blue Mountain Springs	5900	42	16.9	1-27-66	6.8	13.0	7.2
Crane Prairie	5375	48	18.2	1-27-66	14.8	16.0 ^f	14.6
Folly Farm	4450	30	12.5	c			
Jack Creek, Lower (Nev.)	6800	48	8.6	c			
Jordan Valley	4390	48	19.3	c			
Mud Flat (Ida.)	5500	48	12.8	1-31-66	10.7	11.4	8.7
Rodeo Flat (Nev.)	6800	42	11.0	1-31-66	10.6	11.0	10.4
Stinking Water Summit	4800	48	21.9	11-19-65	21.4 ^f	21.3 ^f	20.8 ^f
Taylor Canyon	6200	48	15.1	2-1-66	12.3	15.0 ^f	12.6
Triangle (Ida.)	5150	48	16.6	c			

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	ELEVATION				LAST YEAR	1948-62 AVERAGE
Antelope Ridge (Ida.)	5900	Not	Surveyed			
Barney Creek	5950	c				
Battle Creek ^e (Ida.)	5700	1/27	7	1.3	2.4	- -
Bear Creek ^e (Nev.)	7800	1/26	37	9.8	21.1	11.7 ^h
Big Bend (Nev.)	6700	1/31	19	3.4	8.7	6.4 ^h
Blue Mountain Springs	5900	1/27	29	6.3	20.8	10.8
Buck Pasture ^e	5700	1/27	7	1.3	0.4	- -
Buckskin Lower (Nev.)	6700	c				
Buckskin Upper (Nev.)	7200	c				
Bull Basin ^e (Ida.)	5600	1/27	2	0.4	0.0	- -
Bully Creek ^e	5300	1/27	1	0.2	2.5	3.0 ^m
Call Meadow ^e	5340	1/27	8	1.8	0.8	- -
Columbia Basin ^e (Nev.)	6650	1/27	13	2.6	5.2	- -
Cottonwood-Indian ^e	4320	1/27	0	0.0	0.0	- -

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (l) Ground measurement. (m) Average for 5 or more years in base period.

OWYHEE, MALHEUR WATERSHEDS



LEGEND

- Watershed Boundary
- - - Sub-watershed Boundary
- - - Soil Conservation District Bdry.
- - - County Boundary
- ▲ Forecast Point
- Snow Course
- † Aerial Snow Depth Gage
- ▲ Soil Moisture Station
- └ Precipitation Gage
- ⚡ Radio Telemetry

Owyhee, Malheur Watersheds

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	ELEVATION				LAST YEAR	1948-62 AVERAGE
Crane Prairie	5375	1/27	19	4.4	- -	- -
Crow Camp ^e	5500	1/27	5	1.2	0.6	- -
Disaster Peak (Nev.)	6500	c				
Eldorado Pass	4600	1/28	10	2.0	4.6	2.6 ^h
Fawn Creek ^e (Nev.)	7000	1/27	12	2.4	1.5	- -
Fish Creek ^e	7900	1/27	37	9.6	26.7	- -
Flag Prairie ^e	4750	1/27	5	1.2	4.2	- -
Fox Creek (Nev.)	6800	c				
Fry Canyon (Nev.)	6700	1/31	23	5.0	5.8	6.0 ^h
Gold Creek (Nev.)	6600	1/31	12	2.1	4.4	4.7 ^h
Granite Peak (Nev.)	7800	1/31	22	5.7	17.0	7.5 ^h
Hyde Pasture ^e (Ida.)	5800	1/27	12	2.3	4.8	- -
Jack Creek, Lower (Nev.)	6800	c				
Jack Creek Upper ^e (Nev.)	7250	1/27	14	2.8	3.5	6.8 ^h
Jacks Peak (Nev.)	8420	c				
Lake Creek	5120	1/28	16	3.8	13.1	5.8 ^m
Laurel Draw (Nev.)	6700	2/1	22	4.2	5.0	- -
Logan Valley ^e	5100	1/27	12	2.8	8.7	4.8 ^m
Lookout Butte ^e	5650	1/27	1	0.2	0.0	- -
Louse Canyon ^e	6440	1/27	13	2.5	1.0	- -
Martin Creek (Nev.)	6700	1/31	21	4.0	10.0	5.8 ^h
Merritt Mountain ^e (Nev.)	7000	1/27	T	T	1.8	- -
Midas ^e (Nev.)	7200	1/27	5	1.0	0.3	- -
Mud Flat (Ida.)	5500	1/31	14	2.6	4.6	- -
Oregon Canyon ^e	6950	1/27	6	1.1	2.1	- -
Quinn Ridge ^e (Nev.)	6300	1/27	3	0.6	2.1	- -
Red Canyon ^e (Ida.)	6500	1/27	14	3.4	6.0	- -
Rock Spring	5100	1/28	16	3.5	5.9	4.2
Rodeo Flat (Nev.)	6800	1/31	23	3.4	4.6	5.6 ^h
76 Creek (Nev.)	7100	1/27	21	4.2	8.1	7.4 ^h
Silver City (Ida.)	6400	1/29	27	6.2	18.4	9.7 ^h
Silvies ^e	6900	1/27	12	2.3	10.2	- -
South Mountain #2 (Ida.)	6340	1/28	15	3.7	12.4	7.4
Stag Mountain ^e (Nev.)	7800	1/27	7	1.4	3.6	- -
Stinking Water	4800	1/27	6	1.6	1.3	3.3 ^h
Succor Creek ^e (Ida.)	6100	1/27	13	3.1	6.0	- -
Taylor Canyon (Nev.)	6200	2/1	18	4.0	3.8	3.9
Toe Jam ^e (Nev.)	7700	1/27	23	4.6	5.5	- -
Tremewan Ranch (Nev.)	5700	2/1	11	2.2	1.5	1.7 ^h
Triangle ^e (Ida.)	5150	1/27	T	T	0.8	- -
Trout Creek ^e	7800	1/27	7	1.8	5.6	- -
"V" Lake ^e	6600	1/27	9	1.7	3.5	- -
Vaught Ranch ^e (Ida.)	5950	1/27	6	1.1	- -	- -
War Eagle ^e (Ida.)	7700	1/27	45	10.8	- -	- -

"The Conservation of Water begins with the Snow Survey"

WATER SUPPLY OUTLOOK BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS OREGON

as of

FEBRUARY 1, 1966

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

Outlook for spring and summer water supplies in Baker, Union, and Wallowa Counties remains only fair except for those lands served from reservoired water supplies which are good.

SNOW COVER

Water content of the mountain snowpack is now about 77 percent of the 15-year average (1948-62) and is only 45 percent of last year at this date. The snow is only 70 percent average on Burnt River and 80 percent on Wallowa River drainages.

SOIL MOISTURE

Moisture in the soil mantle under the snowpack is only 66 percent of capacity compared with 85 percent a year ago.

RESERVOIR STORAGE

Reservoired water supplies are about 75 percent greater than average. Unity reservoir now holds 11,900 acre feet compared with 18,900 a year ago. Wallowa Lake contains 31,400 acre feet compared with 27,400 acre feet last year.

STREAMFLOW

Streamflow next spring and summer is forecast to range between 58 percent of average (1948-62) on Powder River and 88 percent average on the East Fork of Wallowa River. Burnt River is forecast to flow only 61 percent average and the Grande Ronde at La Grande will flow about 64 percent.

Flow of many smaller streams heading in lower elevations will be much below average.

WATER SUPPLY OUTLOOK expressed as "Poor", "Fair", "Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Alder Slope	Average	Fair
Baker Valley	Fair	Fair
Big Creek	Fair	Fair
Clover Cr. (nr. N. Powder)	Fair	Fair
Cove	Fair	Fair
Durkee	Fair	Fair
Eagle Valley	Fair	Fair
Elgin	Fair	Fair
Enterprise-Joseph	Average	Average
Hereford-Bridgeport	Average	Fair
Imnaha River	Average	Fair
La Grande-Island City	Fair	Fair
Lostine-Wallowa	Average	Fair
No. Powder River-Wolf Cr.	Fair	Fair
Pine Valley	Fair	Fair
Powder River-Elk Creek	Fair	Fair
Summerville	Fair	Fair
Sumpter Valley	Fair	Fair
Union-Hot Lake	Average	Fair
Unity	Fair	Fair

RESERVOIR STORAGE (1,000 Ac. Ft.) February 1, 1966

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1948-62 AVERAGE
Unity	25.2	11.9	18.9	6.7
Wallowa Lake	37.5	31.4	27.4	17.7

STREAMFLOW FORECASTS^a(1,000 Ac. Ft.) as of February 1, 1966

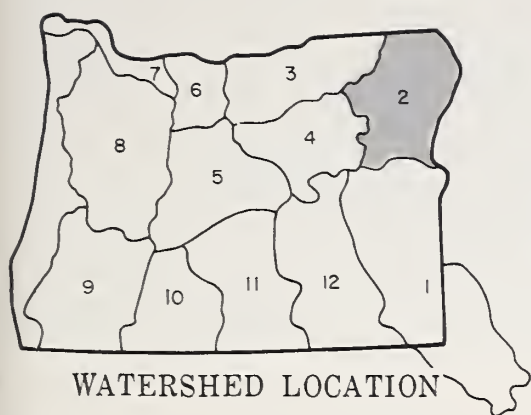
FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT. OF AVERAGE ⁱ
NO.	NAME				
3305	Bear near Wallowa	58	April-Sept.	72	81
2730	Burnt near Hereford ^d	35	Feb.-June	53	66
		25	April-Sept.	41	61
3200	Catherine near Union	60	April-Sept.	73	82
3190	Grande Ronde at LaGrande	165	March-Sept.	246	67
		131	April-Sept.	203	64
3295	Hurricane near Joseph	39	April-Sept.	48	81
2920	Imnaha at Imnaha	275	April-Sept.	318	86
3300	Lostine near Lostine	115	April-Sept.	131	88
2755	Powder near Baker	38	April-July	66	58
		39	April-Sept.	67	58
3250	Wallowa, East Fork near Joseph ^d	11.8	Feb.-Sept.	13.4	88
		10.5	April-Sept.	12.0	88

SOIL MOISTURE

STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
		DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
NAME	ELEVATION						
Blue Mountain Summit	5100	36	16.8	1-28-66	9.0	12.3	9.3
Emigrant Springs	3925	48	22.3	1-28-66	14.7	21.9	19.2
Tollgate	5070	48	23.6	1-27-66	17.7	19.0	18.9

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

BURNT, POWDER, PINE, GRANDE RONDE,
IMNAHA WATERSHEDS



LEGEND

-  Watershed Boundary
-  Sub-watershed Boundary
-  Soil Conservation District Boundary
-  County Boundary
-  Forecast Point
-  Snow Course
-  Soil Moisture Station
-  Aerial Snow Depth Gage
-  Precipitation Gage

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	ELEVATION				LAST YEAR	1948-62 AVERAGE
Aneroid Lake #1	7480	1/31	66	21.2	42.1	24.2
Aneroid Lake #2	7300	1/31	59	19.8	38.1	21.6
Anthony Lake	7125	1/26	47	12.8	28.4	17.3 ^h
Bald Mountain ^e (Ore.)	6700	1/31	27	8.1	18.4	- -
Barney Creek	5950	^c				
Beaver Reservoir	6340	1/26	26	6.3	9.2	7.7
Big Sheep ^e	6200	1/31	46	13.8	30.3	- -
Blue Mountain Summit	5098	1/28	19	4.2	10.7	6.1
Bourne	5800	1/27	31	7.5	19.9	11.4 ^h
County Line	4800	1/28	18	4.2	7.9	4.7 ^h
Dooley Mountain	5430	1/25	14	3.6	11.4	6.0
Eilertson Meadows	5400	1/26	27	7.5	15.0	8.1 ^h
Eldorado Pass	4600	1/28	10	2.0	4.6	2.6 ^h
Gold Center	5340	1/27	27	6.6	14.0	9.1
Goodrich Lake	6775	1/27	68	20.1	- -	24.7 ^h
Intake House	4930	1/26	29	8.1	16.0	- -
Little Alps	6200	1/26	28	5.5	12.6	- -
Little Antone	5000	1/26	18	4.3	- -	- -
Lucky Strike	5050	1/27	31	7.2	15.4	8.7 ^h
Meacham	4300	1/28	24	5.6	12.1	6.8
Mirror Lake	8200	1/31	60	21.0	72.8	- -
Moss Spring	5850	1/31	34	8.8	24.2	16.5
Power Plant	3990	1/26	15	4.0	8.7	- -
Schneider Meadows	5400	1/27	46	13.5	28.3	20.8
Schoolmarm	4775	1/28	18	4.1	6.0	4.1 ^h
Standley ^e	7400	1/31	35	10.5	- -	- -
Taylor Green	5740	1/31	28	7.2	15.7	- -
Tipton	5100	1/28	23	5.7	13.7	7.6 ^h
Tollgate	5070	1/27	47	13.1	18.5	18.3
TV Ridge ^e	7000	1/31	35	10.5	18.4	- -



WATER SUPPLY OUTLOOK UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS OREGON

Area 3

as of
FEBRUARY 1, 1966

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

Outlook for spring and summer water supplies in the Umatilla, Morrow, and Gilliam County area is only fair at this midwinter date. Remaining winter storms will have to bring much above average moisture if this region is to have average water supplies.

SNOW COVER

Water content of the mountain snowpack is now 72 percent average on the Walla Walla watersheds, 81 percent on the Umatilla and 94 percent on Butter-Willow Creeks. There is less than half the amount of last year's snow now present on the Umatilla.

SOIL MOISTURE

Moisture in the soil mantle under the snowpack is 74 percent of capacity which is fair. However, moisture was at the 88 percent level a year ago.

RESERVOIR STORAGE

Stored water supplies in McKay reservoir are only 89 percent of average at 26,000 acre feet and are far below the 66,000 acre feet held last year. Cold Springs reservoir also holds only 26,000 acre feet or 88 percent average at this time. Last year it was 29,600 acre feet at this date. Inflow to these reservoirs continues to be much below average.

STREAMFLOW

Streamflow next spring and summer is forecast at 79 percent average (1948-62 period) on the Walla Walla and 87 percent average on the Umatilla at Pendleton. Flow of McKay Creek into the reservoir is expected to be only 78 percent average. Butter Creek is expected to flow 86 percent average in the March-July period.

Flow of small streams heading in lower elevations will be much below average.

WATER SUPPLY OUTLOOK

expressed as "Poor", "Fair",
"Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Birch Creek	Fair	Fair
Butter Creek	Average	Fair
Couse Creek	Fair	Fair
Dry Creek	Fair	Fair
Dugger Creek	Fair	Fair
Johnson Creek	Fair	Fair
McKay Creek	Fair	Fair
Mill Creek	Fair	Fair
Mud Creek	Fair	Fair
Pine Creek	Fair	Fair
Rhea Creek	Fair	Fair
Rock Creek	Fair	Fair
Umatilla R. (Cold Springs Reservoir)	Average	Fair
Umatilla River, Main	Average	Fair
Umatilla River (McKay Res.)	Average	Fair
Walla Walla River, Little	Fair	Fair
Walla Walla River, Main	Fair	Fair
Walla Walla River, No. Fk.	Fair	Fair
Walla Walla River, So. Fk.	Fair	Fair
Willow Creek	Average	Fair

RESERVOIR STORAGE (1,000 Ac. Ft.) February 1, 1966

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1948-62 AVERAGE
Cold Springs Camp	50.0	26.0	29.6	29.6
McKay	73.8	26.0	66.0	29.1

STREAMFLOW FORECASTS^a(1,000 Ac. Ft.) as of February 1, 1966

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE ⁱ
NO.	NAME				
0320	Butter Creek near Pine City	12.5	March-July	14.5	86
0225	McKay near Pilot Rock	50	Feb.-July	62	81
		25	April-Sept.	32	78
0200	Umatilla near Gibbon	100	March-Sept.	116	86
		80	April-Sept.	93	86
0210	Umatilla at Pendleton	220	March-Sept.	247	89
		160	April-Sept.	183	87
0100	Walla Walla, South Fork near Milton	75	Mar.-Sept.	89	84
		60	April-Sept.	76	79

SOIL MOISTURE

STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
		DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
	NAME		ELEVATION				
	Athena-Weston	48	18.7	1/27/66	13.7	14.6	13.2
	Battle Mountain Summit	48	13.8	1/27/66	11.7	13.8	12.5
	Emigrant Springs	48	22.3	1/28/66	14.7	21.9	19.2
	Tollgate	48	23.6	1/27/66	17.7	19.0	18.9

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	ELEVATION				LAST YEAR	1948-62 AVERAGE
Arbuckle Mountain	5400	1/31	28	7.8	10.0	8.3
Battle Mountain Summit	4340	1/27	10	1.7	3.6	2.2 ^m
Blue Mountain Camp	4300	1/27	33	9.6	13.4	- -
Emigrant Springs	3925	1/28	18	4.1	7.0	5.4
Lucky Strike	5050	1/27	31	7.2	15.4	8.7 ^h
Meacham	4300	1/28	24	5.6	12.1	6.8
Tollgate	5070	1/27	47	13.1	18.5	18.3
Weston Mountain	2700	1/27	5	1.0	3.2	- -

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records.

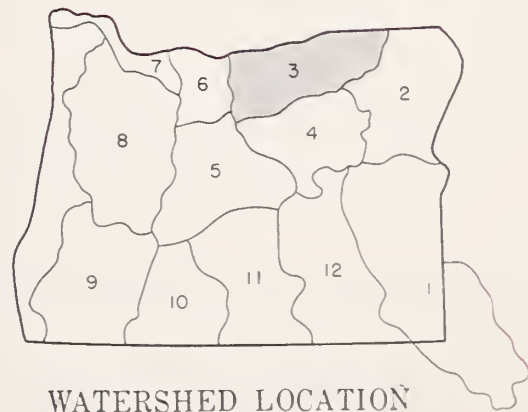
UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS

10 0 10 20 30
SCALE IN MILES



LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- ▲ Forecast Point
- Snow Course
- ▼ Soil Moisture Station
- └─ Precipitation Gage



WATER SUPPLY OUTLOOK UPPER JOHN DAY WATERSHEDS

OREGON

as of

FEBRUARY 1, 1966

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

Outlook for spring and summer water supplies in the John Day country at this midwinter date is only fair. Snow is near average but soil moisture is relatively low and base flow of the John Day River is far below average.

SNOW COVER

Water content of the mountain snowpack is 80 percent average but less than half of that a year ago. Remaining winter storms must bring much above average amounts of moisture if this region is to have average water supplies.

SOIL MOISTURE

Moisture in the soil mantle under the mountain snowpack is only 64 percent average compared with 89 percent one year ago. Mountain soils will soak up considerable snowmelt water next spring.

STREAMFLOW

Streamflow next spring and summer is forecast at 69 percent of the 15-year average (1948-62) for the John Day at Prairie City and for the Middle Fork John Day at Ritter. Strawberry Creek, a small north-facing tributary near Prairie City, is forecast at 75 percent average.

Flow of many smaller streams heading in lower elevations will be much below average.

The flow of the John Day at Service Creek* has averaged only 52 percent since October 1 but is down to about 30 percent in the past three weeks. This extremely low flow may indicate greater shortage of spring and summer streamflow than is now foreseen.

*Preliminary data from U. S. Geological Survey.

WATER SUPPLY OUTLOOK

expressed as "Poor", "Fair",
"Average" or "Excellent"

RESERVOIR STORAGE (1,000 Ac. Ft.) February 1, 1966

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Beech Creek	Fair	Fair
Beech Creek-Fox-Long Cr.	Fair	Fair
Bridge-Mountain Creeks	Fair	Fair
Camas Creek	Fair	Fair
Indian-Pine Creeks	Fair	Fair
John Day River, Main Fork	Fair	Fair
John Day River, Mid. Fork	Fair	Fair
John Day River, N. Fork	Fair	Fair
John Day River, S. Fork	Fair	Fair
Monument-Kimberly	Fair	Fair
Strawberry Creek	Fair	Fair

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1948-62 AVERAGE

STREAMFLOW FORECASTS^a(1,000 Ac. Ft.) as of February 1, 1966

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT. OF AVERAGE ⁱ
NO.	NAME				
0385	John Day at Prairie City	40	March-July	56	71
		35	April-Sept.	51	69
0440	John Day Middle Fork at Ritter	110	March-July	153	72
		90	April-Sept.	131	69
0375	Strawberry near Prairie City	6.0	March-July	8.2	73
		6.6	April-Sept.	8.8	75

SOIL MOISTURE

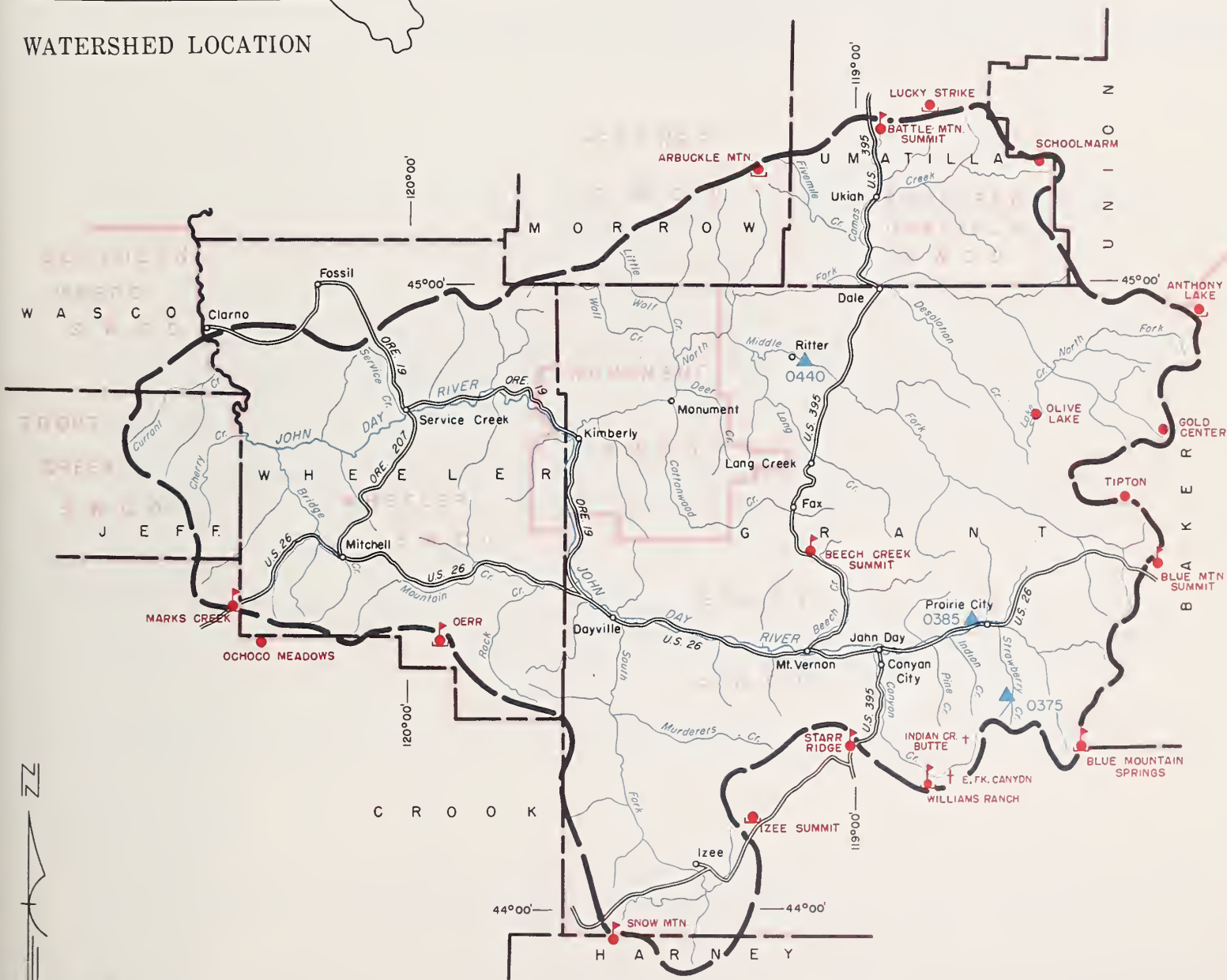
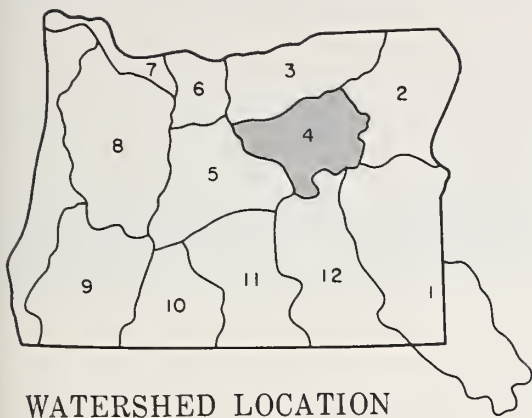
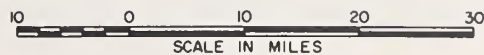
STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
		DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
NAME	ELEVATION						
Battle Mountain Summit	4340	48	13.8	1-27-66	11.7	13.8	12.5
Blue Mountain Springs	5900	42	16.9	1-27-66	6.8	13.0	7.2
Blue Mountain Summit	5100	36	16.8	1-28-66	9.0	12.3	9.3
Derr	5670	24	9.0	1-31-66	6.8	8.4	- -
Marks Creek	4540	36	14.1	1-27-66	11.3	13.8	9.3
Snow Mountain	6300	48	16.7	1-28-66	12.0	16.3	12.2
Starr Ridge	5150	36	10.6	1-25-66	6.4	10.3	8.1

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	ELEVATION				LAST YEAR	1948-62 AVERAGE
Anthony Lake	7125	1/26	47	12.8	28.4	17.3 ^h
Arbuckle Mountain	5400	1/31	28	7.8	10.0	8.3
Battle Mountain Summit	4340	1/27	10	1.7	3.6	2.2 ^m
Beech Creek Summit	4800	1/25	16	2.9	5.8	4.3 ^h
Blue Mountain Springs	5900	1/27	29	6.3	20.8	10.8
Blue Mountain Summit	5098	1/28	19	4.2	10.7	6.1
Derr	5670	1/31	26	7.0	17.2	6.9
East Fork Canyon ^e	5700	1/27	20	4.4	7.3	- -
Gold Center	5340	1/27	27	6.6	14.0	9.1
Indian Creek Butte ^e	6550	1/27	43	9.5	22.7	- -
Izee Summit	5293	1/25	21	3.8	8.7	6.2 ^h
Lucky Strike	5050	1/27	31	7.2	15.4	8.7 ^h
Marks Creek	4540	1/27	21	5.4	4.8	3.6
Ochoco Meadows	5200	1/29	30	8.4	8.8	7.8
Olive Lake	6000	1/26	41	9.4	21.2	13.0
Schoolmarm	4775	1/28	18	4.1	6.0	4.1 ^h
Snow Mountain	6300	1/28	27	6.9	16.3	- -
Starr Ridge	5150	1/25	17	3.1	8.0	4.6 ^h
Tipton	5100	1/28	23	5.7	13.7	7.6 ^h
Williams Ranch	4500	1/25	11	1.8	- -	- -


(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

UPPER JOHN DAY WATERSHEDS



LEGEND

- Watershed Boundary
- - - Sub-watershed Boundary
- - - Soil Conservation District Bdry
- - - County Boundary
- ▲ Forecast Point
- Snow Course
- ▼ Soil Moisture Station
- † Aerial Snow Depth Gage
- ┌ Precipitation Gage



WATER SUPPLY OUTLOOK UPPER DESCHUTES, CROOKED WATERSHEDS OREGON

as of

FEBRUARY 1, 1966

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

Outlook for spring and summer water supplies in Crook, Jefferson, and Deschutes Counties is fair to good at this midwinter date. Lands served from reservoir water supplies should have a good season.

SNOW COVER

Water content of the mountain snowpack is 115 percent of the 15-year average (1948-62), but is much below last year's heavy snow figures.

SOIL MOISTURE

Moisture in the soil mantle under the snowpack is far below the very wet conditions of last year but is 76 percent of capacity and satisfactory.

RESERVOIR STORAGE

Reservoir water supplies are very good with present storage 105 percent average on Crooked River and 118 percent average on Deschutes River. Ochoco and Prineville reservoirs now hold 23,700 and 93,400 acre feet, respectively.

On the Deschutes River, Crane Prairie and Wickiup reservoirs hold 48,100 and 189,500 acre feet, respectively, while Crescent Lake is reported to contain 63,100 acre feet.

STREAMFLOW

Streamflow next spring and summer is forecast at 25,000 acre feet or 78 percent of the 15-year (1948-62) average for Ochoco reservoir. Flow of Crooked River near Post is expected to be 88,000 acre feet or 70 percent of average.

The Little Deschutes is forecast to flow 100,000 acre feet or 88 percent average April through September and the main river, as measured at Benham Falls, is expected to produce 525,000 acre feet or 83 percent average.

Flow of Squaw and Tumalo Creeks is forecast at 55,000 and 54,000 acre feet, respectively, or 98 and 100 percent of average.

WATER SUPPLY OUTLOOK expressed as "Poor", "Fair", "Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Arnold Irrigation District	Average	Average
Bear Creek	Average	Fair
Beaver Creek	Average	Fair
Camp Creek	Average	Fair
Central Ore. Irrig. Dist.	Average	Average
Crooked River	Average	Fair
Deschutes River	Average	Fair
Hay-Trout Creeks	Average	Fair
Lone Pine Irrig. Dist.	Average	Average
Mill Creek	Average	Fair
North Unit Irrig. Dist.	Average	Average
Ochoco Creek	Average	Fair
Sisters Irrigation Dist.	Average	Average
Snow Creek Irrig. Dist.	Average	Average
Squaw Creek Irrig. Dist.	Average	Average
Swalley Ditch	Excellent	Excellent
Tumalo Project	Average	Average
Walker Basin Irrig. Dist.	Average	Average

RESERVOIR STORAGE (1,000 Ac. Ft.) February 1, 1966

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1948-62 AVERAGE
Crane Prairie	55.3	48.1	58.7	42.6
Crescent Lake	117.2*	63.1	67.0	49.5
Ochoco	47.5	23.7	38.1	21.1
Prineville	153.0	93.4	122.0	- -
Wickiup	200.0	189.5	158.8	161.7
*Includes space for 25,790 a.f. for flood storage only.				
Note: Current storage figure for Crescent Lake includes 5360 acre feet of known dead and inactive storage.				

STREAMFLOW FORECASTS^a(1,000 Ac. Ft.) as of February 1, 1966

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT. OF AVERAGE ⁱ
NO.	NAME				
0535	Crane Prairie Reservoir total Inflow	154	Feb.-Sept.	171	90
0600	Crescent at Crescent Lake ^d	130	April-Sept.	143	91
		27	March-July	30	90
		30	April-Sept.	33	91
0795	Crooked near Post	155	Feb.-July	201	77
0645	Deschutes at Benham Falls ^d	88	April-Sept.	125	70
		350	April-July	417	84
		525	April-Sept.	631	83
0500	Deschutes below Snow Creek	80	Feb.-Sept.	89	90
0630	Deschutes, Little near Lapine ^d	65	April-Sept.	75	87
		106	Feb-July	130	82
		100	April-Sept.	113	88
0848	Ochoco Reservoir net Inflow	43	Feb.-June	50	86
0555	Odell near Crescent	25	April-Sept.	32	78
		30	April-Sept.	34	88
		55	April-Sept.	56	98
0750	Squaw near Sisters	55	April-Sept.	56	98
0730	Tumalo near Bend ^d	54	April-Sept.	54	100

SOIL MOISTURE

STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
		DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
NAME	ELEVATION						
Derr	5670	24	9.0	1-31-66	6.8	8.4	- -
Marks Creek	4540	36	14.1	1-27-66	11.3	13.8	9.3
Snow Mountain	6300	48	16.7	1-28-66	12.0	16.3	12.2

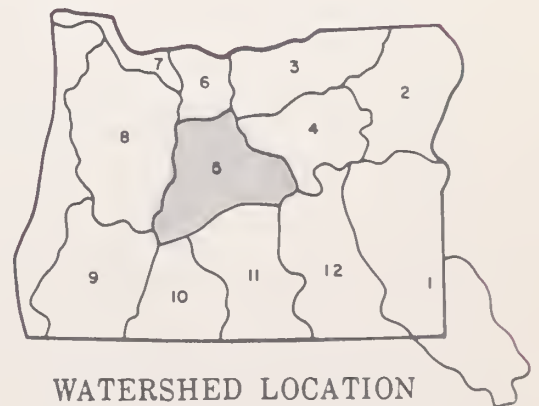
(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

UPPER DESCHUTES, CROOKED WATERSHEDS



LEGEND

- Watershed Boundary
- - - Sub-watershed Boundary
- - - Soil Conservation District Bdry
- - - County Boundary
- ▲ Forecast Point
- Snow Course
- ▼ Soil Moisture Station
- ⊥ Precipitation Gage



Upper Deschutes, Crooked Watersheds

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	ELEVATION				LAST YEAR	1948-62 AVERAGE
Black Pine Spring	4600	1/29	18	6.3	T	4.1 ^h
Caldwell Ranch	4400	1/25	32	11.2	- -	9.2 ^h
Cascade Summit	4880	1/25	73	25.0	32.4	21.9
Chemult	4760	1/29	34	12.3	12.5	9.1
Deer Creek	4554	1/25	49	15.1	23.4	- -
Derr	5670	1/31	26	7.0	17.2	6.9
Fire Road	5050	1/24	24	6.6	9.3	5.9 ^h
Hogg Pass	4755	1/28	98	34.7	39.9	29.0
Hungry Flat	4400	1/30	27	9.9	4.8	5.8 ^h
Irish Taylor	5500	1/25	78	23.8	35.6	26.8 ^h
Marks Creek	4540	1/27	21	5.4	4.8	3.6
Mowich	4700	1/28	19	7.6	0.0	5.1 ^h
New Crescent Lake	4800	1/27	44	13.5	14.5	12.4 ^h
New Dutchman Flat #2	6400	1/30	103	39.6	45.8	33.5 ^h
Ochoco Meadows	5200	1/29	30	8.4	8.8	7.8
Paulina Lake	6330	1/24	51	14.0	24.2	15.5 ^h
Paulina Prairie	4285	1/24	15	4.9	1.9	1.9 ^h
Snow Mountain	6300	1/28	27	6.9	16.3	- -
Tamarack	4800	2/1	19	4.6	8.8	- -
Tangent	5400	1/30	67	22.7	22.1	16.8 ^h
Three Creeks Butte	5200	1/29	34	12.0	14.4	8.8 ^h
Three Creeks Meadows	5650	1/29	53	18.4	19.1	13.9 ^h
Waldo Lake	5500	1/26	69	20.4	29.1	20.6 ^h
Willamette Pass	5600	1/27	94	31.3	42.1	28.5 ^h
Windigo Pass	5800	1/28	92	31.1	45.3	29.4

"The Conservation of Water begins with the Snow Survey"

WATER SUPPLY OUTLOOK HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS OREGON

as of

FEBRUARY 1, 1966

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

Outlook for spring and summer water supplies in the Hood River-Wasco area is about average although some late season shortages are foreseen for the major tributaries of Wasco streams.

SNOW COVER

Water content of the mountain snowpack is 123 percent of the 15-year average (1948-62) and greater than last year on this date. No snow measurements have been made so far this year on the Mile Creeks watersheds but it is thought the snow cover there is average or better.

SOIL MOISTURE

Moisture in the soil is good to excellent at low elevations but is reported to be about average at higher elevations under the snowpack.

RESERVOIR STORAGE

Clear Lake is reported to hold 1,600 acre feet as of the end of January. Last year there were 4,500 acre feet reported. This should improve with snowmelt.

STREAMFLOW

Spring and summer streamflow is forecast at 94 percent of the 15-year average (1948-62) for Hood River and White River.

Mile Creeks and small Wasco area streams are expected to produce below average flows in the midsummer period.

WATER SUPPLY OUTLOOK

expressed as "Poor", "Fair",
"Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Aldridge Ditch (Tony Creek)	Average	Average
Badger Creek	Average	Fair
Dee Irrigation District	Average	Average
East Fork Irrig. Dist.	Average	Fair
Farmers Irrigation Dist.	Average	Average
Hood River Irrig. Dist.	Average	Fair
Juniper Flat	Average	Average
Middle Fork Irrig. Dist.	Average	Fair
Mile Creeks	Average	Fair
Mill Creek	Average	Fair
Mount Hood Irrig. Dist.	Average	Average
Rock-Gate-Threemile Crs.	Average	Fair
Tygh Creek	Average	Fair
White River	Average	Average

RESERVOIR STORAGE (1,000 Ac. Ft.) February 1, 1966

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1948-62 AVERAGE
Clear Lake	11.8	1.6	4.5	- -

STREAMFLOW FORECASTS^a(1,000 Ac. Ft.) as of February 1, 1966

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE ⁱ
NO.	NAME				
1210	Hood River near Hood River ^d	305	April-July	322	95
		355	April-Sept.	381	93
1185	Hood, West Fork near Dee	145	April-July	155	94
		169	April-Sept.	179	94
1015	White below Tygh Valley	147	April-July	158	93
		165	April-Sept.	176	94

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	ELEVATION				LAST YEAR	1948-62 AVERAGE
Brooks Meadows	4300	c				
Clear Lake	3500	1/27	35	12.0	11.9	6.9 ^h
Clear Lake (Experimental)	3500	1/27	48	16.2	15.8	12.1 ^h
Cooper Spur	3490	2/1	35	14.2	14.1	- -
Greenpoint Reservoir	3400	1/29	48	19.5	20.0	12.0
Knebal Springs	3850	c				
Lambert Point	7000	Not	surveyed			
Parkdale	1770	2/1	10	4.0	0.0	- -
Phlox Point	5600	1/27	112	41.6	46.8	39.7
Red Hill	4400	1/25	94	35.0	30.2	30.2
Still Creek	3700	1/27	56	20.8	21.1	17.0
Switchback	3255	2/1	40	17.2	8.9	- -
Tilly Jane	6000	1/23	94	35.3	35.8	28.2
Ulrich Ranch Junction	3350	c				
Umbrella Falls	5400	Not	surveyed			
Upper Valley	2530	2/1	22	8.4	4.3	- -

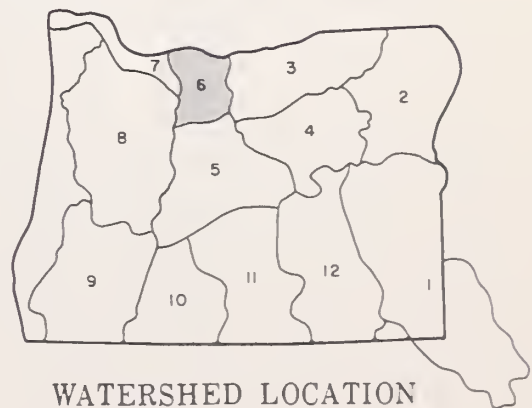
(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS



LEGEND

- Watershed Boundary
- - - Sub-watershed Boundary
- - - Soil Conservation District Bdry.
- - - County Boundary
- ▲ Forecast Point
- Snow Course
- † Aerial Snow Depth Gage
- ▼ Soil Moisture Station
- ⌈ Precipitation Gage



WATER SUPPLY OUTLOOK LOWER COLUMBIA WATERSHEDS

OREGON

as of

FEBRUARY 1, 1966

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

As of midwinter, water supply outlook is good throughout most of the Columbia Basin for both irrigation and power. Streamflow forecasts range near average. Slightly above average flows are in prospect for the Canadian section of the basin and from the Cascade range in Oregon.

Carry-over storage for irrigation is well above average in large reservoirs except for the Yakima reservoirs which are slightly less than average. These reservoirs are expected to fill.

SNOW COVER

The major storm period in the basin, which is responsible for most of the present snowpack, occurred in late December and early January. Snowpack is now slightly above average in Canada and in the Cascade range of Oregon.

Deficiencies in snow exist on the upper Clark Fork in Montana and south along the Continental Divide. Seasonal snow accumulation has been relatively light on the Owyhee watershed and nearby areas in Oregon and Idaho.

SOIL MOISTURE

Soil moisture conditions over the basin tend to be near average at both mountain and valley elevations but generally much drier than for a year ago on this date.

STREAMFLOW

Flow of the Columbia at The Dalles, Oregon* has been slightly below average during the fall and winter months. The record by months for The Dalles is as follows:

<u>Month</u>	<u>Percent of Average Discharge (1948-62)</u>			
October	93	(Adjusted for storage)		
November	95	"	"	"
December	87	"	"	"
January	92	"	"	"

Flows of the Columbia River for next spring and summer are forecast as follows:

April-June	74,000,000 acre feet	100 percent average
April-September	109,980,000 " "	101 " "

*Preliminary data from U. S. Geological Survey, Portland, Oregon.

STREAMFLOW FORECASTS^a(1,000 Ac. Ft.) as of February 1, 1966

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE ⁱ
NO.	NAME				
1057	Columbia at The Dalles	74,000 109,980	April-June April-Sept.	74,100 108,500	100 101

HISTORICAL DATA (Columbia River at The Dalles)

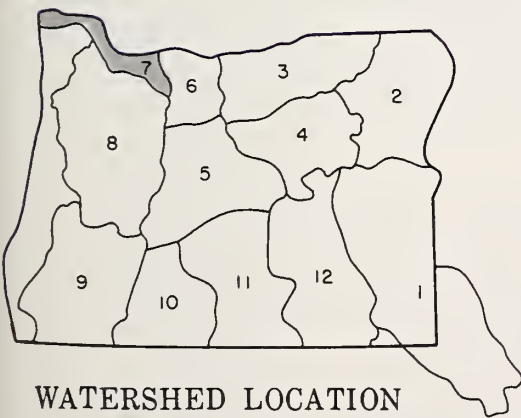
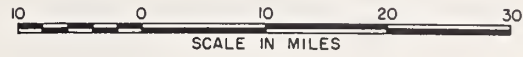
YEAR	STREAMFLOW ^d (1,000 A.F.)			PEAK (1,000 c.f.s.)	DATE
	APR. — SEPT.	APR. — JUNE	MAY — JUNE		
1943	115,000	75,300	52,400	541	June 21
1944	61,900	39,200	32,100	326	June 19
1945	81,600	54,600	47,300	505	June 8
1946	108,100	75,400	59,600	581	May 30
1947	100,300	70,000	56,800	536	May 11
1948	130,500	94,600	81,900	999	May 31
1949	95,700	71,400	56,000	622	May 18
1950	120,400	74,700	61,200	744	June 25
1951	113,000	75,600	59,100	597	May 26
1952	107,700	77,500	57,300	557	May 28
1953	100,600	64,900	55,800	609	June 17
1954	119,500	70,500	59,300	561	May 23
1955	99,500	58,300	50,300	545	June 26
1956	131,400	96,900	75,800	815	June 3
1957	105,700	80,500	67,200	700	May 22
1958	97,700	72,000	58,600	593	May 31
1959	112,500	71,900	58,900	555	June 23
1960	97,000	64,000	48,000	442	June 6
1961	101,400	74,400	64,000	699	June 8
1962	94,600	64,100	49,200	460	June 5
1948-62 Avg.	108,500	74,100	60,200	633	
1963	87,000	56,300	46,200	437	June 18
1964	109,020	70,739	61,313	662	June 18

LOWER COLUMBIA RIVER FLOOD STAGES (with 9.5' tide at Astoria)

VANCOUVER GAGE (Weather Bu.)	FLOW AT THE DALLES (1,000 c.f.s.)	DRAINAGE DISTRICT PUMPHOUSE						
		SANDY	SAUVIE ISL.	SCAPPOOSE	DEER ISL.	RAINIER	BEAVER	WOODSON
		RIVER MILES						
		118.9	96.0	91.0	77.0	62.0	52.0	47.0
35 (1894)	1210	41.2	34.2	33.3	28.5	21.9	17.5	15.5
34	1160	40.5	33.5	32.5	27.7	21.2	17.0	15.0
33	1100	39.6	32.4	31.4	26.7	20.2	16.1	14.3
32	1050	38.9	31.5	30.5	25.7	19.5	15.4	13.7
31 (1948)	1000	38.0	30.7	29.5	25.1	18.8	14.7	13.0
30	943	36.6	29.5	28.5	24.3	18.1	14.0	12.4
29	897	35.5	28.5	27.7	23.7	17.5	13.4	11.8
28	853	34.3	27.5	26.7	22.8	17.0	13.0	11.4
27 (1956)	811	33.0	26.5	25.6	21.8	16.2	12.5	11.0
26 (1950)	771	32.1	25.5	24.6	20.9	15.5	12.2	10.7
25	733	30.7	24.2	23.2	19.7	14.6	11.7	10.3
24	697	29.7	23.0	22.2	19.0	14.1	11.4	10.2
23	662	29.0	22.3	21.4	18.4	13.6	11.2	10.0
22	628	28.1	21.4	20.3	17.2	13.0	10.9	9.7
21	595	27.2	20.7	19.5	16.4	12.6	10.6	9.6
20 (1954)	564	26.2	19.8	18.6	15.5	12.1	10.2	9.4
19	534	25.5	19.2	18.0	15.0	11.8	10.0	9.3
18	501	24.4	18.3	17.2	14.3	11.4	9.8	9.1
17	479	23.4	17.4	16.4	13.7	11.0	9.6	8.9
16	452	22.4	16.5	15.5	13.0	10.5	9.3	8.7

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records.

LOWER COLUMBIA WATERSHEDS

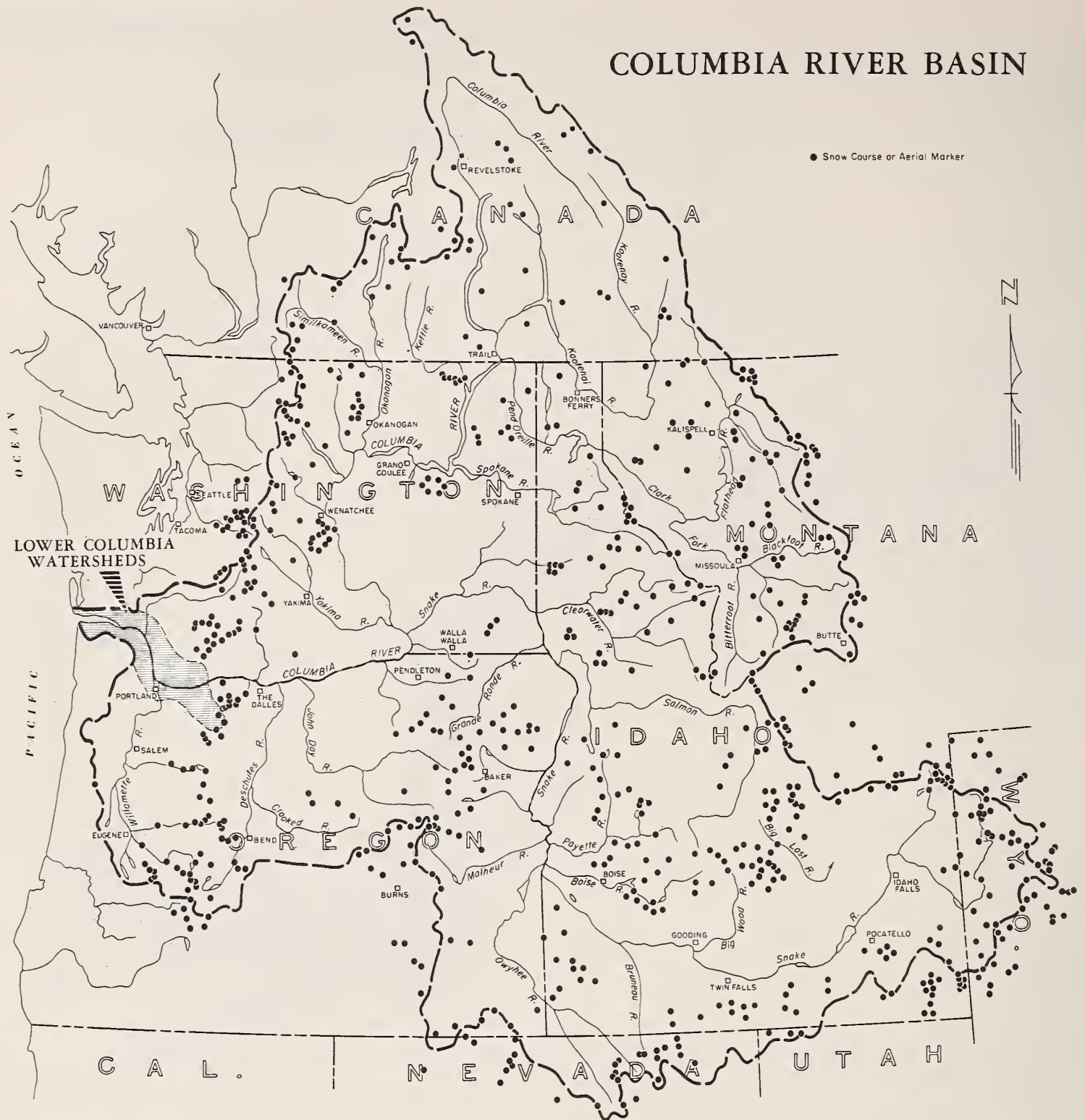


WATERSHED LOCATION

LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- River Miles
- Snow Course

COLUMBIA RIVER BASIN



"The Conservation of Water begins with the Snow Survey"



WATER SUPPLY OUTLOOK WILLAMETTE WATERSHEDS OREGON

as of

FEBRUARY 1, 1966

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

Outlook for spring and summer water supplies in Willamette Valley is about average at this midwinter date.

SNOW COVER

Water content of the mountain snowpack totals about 132 percent of the 15-year average (1948-62). Snow on the Clackamas, Santiam, and Coast Fork watersheds is very heavy in the lower elevations between 2500 and 3800 feet above sea level and can contribute heavily to snowmelt runoff.

SOIL MOISTURE

Moisture in the soil mantle under the snowpack at low and moderate elevations is near water holding capacity. At higher elevations some frost is present in the top soils and less moisture has penetrated into the upper four feet of the soil profile.

RESERVOIR STORAGE

Water held in the multiple-purpose reservoirs on the Willamette is slightly below the 15-year average (1948-62) but management of the reservoirs is proceeding in accordance with established plans.

STREAMFLOW

Spring and summer streamflow is forecast at 104 and 105 percent average for the Clackamas and Row Rivers. The Middle Fork of the Willamette is forecast at 101 percent average and the McKenzie River at 99 percent average. Flow of the North and South Santiam Rivers is forecast at 97 and 90 percent of the 15-year average.

Preliminary data from the U. S. Geological Survey indicate flow of the Middle Fork of the Willamette has totaled only 59 percent average since October 1, 1965. However, flow during January, 1966 averaged 107 percent -- the first time this season this stream has come up to average.

WATER SUPPLY OUTLOOK

expressed as "Poor", "Fair",
"Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Calapooya	Average	Average
Clackamas	Average	Average
McKenzie	Average	Average
Molalla	Average	Average
Santiam, North	Average	Average
Santiam, South	Average	Average
Willamette, Coast Fork	Average	Average
Willamette, Middle Fork	Average	Average

RESERVOIR STORAGE (1,000 Ac. Ft.) February 1, 1966

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1948-62 AVERAGE
Cottage Grove	30.0*	0.1	4.5	1.6
Cougar	155.2*	0.0	75.0	- -
Detroit	299.9*	0.9	193.8	30.1
Dorena	70.5*	0.1	37.8	5.6
Fall Creek	115.0*	- -	- -	- -
Fern Ridge	94.2*	0.2	43.1	18.7
Hills Creek	200.0*	1.0	50.2	- -
Lookout Point	337.2*	1.0	146.2	26.9
Timothy Lake	61.7	45.0	61.7	39.5
*Multiple purpose reservoir--space reserved primarily for flood runoff.				

STREAMFLOW FORECASTS^a(1,000 Ac. Ft.) as of February 1, 1966

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT. OF AVERAGE ⁱ
NO.	NAME				
2080	Clackamas at Big Bottom	155	April-July	150	103
		190	April-Sept.	184	103
2100	Clackamas at Estacada	805	April-July	770	105
		930	April-Sept.	890	104
2095	Clackamas above Three Lynx	605	April-July	584	104
		700	April-Sept.	683	103
1590	McKenzie at McKenzie Bridge	505	April-July	502	100
		655	April-Sept.	658	99
1625	McKenzie near Vida	1150	April-July	1144	100
		1385	April-Sept.	1392	99
2090	Oak Grove Fork above Power Intake	157	April-July	147	107
		200	April-Sept.	190	106
1545	Row near Dorena	114	April-July	108	106
		118	April-Sept.	112	105
1830	Santiam, North at Mehama ^d	855	April-July	884	97
		955	April-Sept.	991	97
1875	Santiam, South at Waterloo	575	April-July	637	90
		608	April-Sept.	675	90
1480	Willamette, Mid. Fk. blw. N. Fk. nr. Oakridge ^d	865	April-July	863	100
		980	April-Sept.	968	101
1910	Willamette at Salem ^d	4770	April-July	5040	95
		5330	April-Sept.	5566	96

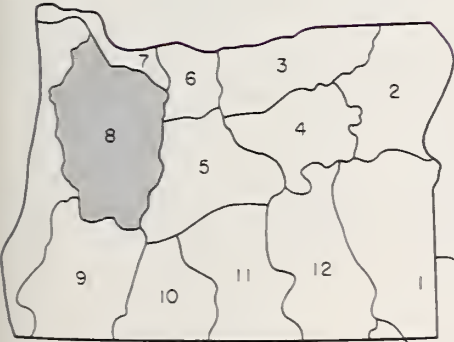
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WILLAMETTE WATERSHEDS

LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- ▲ Forecast Point
- Snow Course
- ⚡ Radio Telemetry

10 0 10 20 30
SCALE IN MILES



WATERSHED LOCATION

Willamette Watersheds

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	ELEVATION				LAST YEAR	1948-62 AVERAGE
Big Bottom	2118	2/3	25	10.3 ^j	7.2	4.5 ^h
Cascade Summit	4880	1/25	73	25.0	32.4	21.9
Champion	4500	2/1	93	30.7	23.6	18.8
Clackamas Lake	3400	c				
Clear Lake	3500	1/27	35	12.0	11.9	6.9 ^h
Clear Lake (Experimental)	3500	1/27	48	16.2	15.8	12.1 ^h
Dead Horse Grade	3800	1/31	49	15.3	16.2	13.7 ^h
Detroit Town	1610	1/28	11	5.2	*	2.5 ^h
Detroit Dam	1580	1/28	0	0.0	0.0	0.8 ^h
Golden Curry Creek	3136	2/1	36	13.2	6.0	5.4 ^h
Hogg Pass	4755	1/28	98	34.7	39.9	29.0
Lake Harriet	2045	Not surveyed				
Layng Creek	1200	2/1	0	0.0	0.0	0.3 ^m
Lost Creek Ranch	1956	1/31	20	8.4	4.3	3.9 ^h
Lund Park	1740	2/1	0	0.0	0.0	1.5 ^h
Marion Forks	2730	1/28	42	15.8	11.8	10.5
Marys Peak	3620	Not surveyed				
McCredie Springs	2120	1/25	T	T	0.0	1.2 ^h
McKenzie	4800	1/31	101	35.9	37.4	30.4
McKenzie Bridge	1372	1/31	0	0.0	0.0	1.7 ^h
Meridian Dam	750	1/25	0	0.0	0.0	T ^h
Mill City	826	1/28	0	0.0	0.0	0.2 ^m
Oakridge	1310	1/25	0	0.0	0.0	T ^h
Peavine Ridge	3500	1/31	50	19.0	- -	12.5
Phlox Point	5600	1/27	112	41.6	46.8	39.7
Railroad Overpass	2750	1/25	19	6.3	T	3.4 ^h
Salt Creek Falls	4000	1/25	53	16.8	19.1	11.4 ^h
Santiam Junction	3990	1/28	71	26.3	23.0	17.8
Still Creek	3700	1/27	56	20.8	21.1	17.0
Timothy Lake	3295	Not surveyed				
Vida	800	1/31	0	0.0	0.0	0.5 ^h
Waldo Lake	5500	1/26	69	20.4	29.1	20.6 ^h
Weaver Creek	2440	2/1	6	2.1	0.0	1.6 ^h
White Branch Slide	2800	1/31	28	9.8	5.8	5.4 ^h
Whitewater Bridge	2175	1/28	26	8.7	8.5	5.3 ^h
Willamette Pass	5600	1/27	94	31.3	42.1	28.5 ^h
RADIO REPORTS BY AUTOMATIC SNOW-MEASURING STATIONS						
			Time			
Peavine Ridge	3500	2/1	8:34 A.M.	16.5	- -	- -
Phlox Point	5600	2/1	8:25 A.M.	38.5	- -	- -
*Ponded water.						

"The Conservation of Water begins with the Snow Survey"

WATER SUPPLY OUTLOOK ROGUE, UMPQUA, WATERSHEDS OREGON

as of

FEBRUARY 1, 1966

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

Outlook for spring and summer water supplies in the Umpqua-Rogue basins is very good at this midwinter date. Mountain snowpacks are above average, reservoired water supplies are excellent and watershed soils are slightly above average in moisture content.

SNOW COVER

Water content of the mountain snowpack is about 132 percent of the 15-year average (1948-62). The snow is greater than a year ago on the Umpqua watersheds and 87 percent of last year on the Rogue.

Snow at elevations below 5000 feet is much greater than average and can contribute heavily to snowmelt runoff.

SOIL MOISTURE

Moisture in the soil mantle under the snowpack is about average and provides a good base for runoff from snowmelt.

RESERVOIR STORAGE

Stored water supplies in reservoirs of the Medford and Rogue River Valley Irrigation Districts are 123 percent of the 15-year average (1948-62) and total about 16,700 acre feet compared with 21,700 acre feet a year ago.

Water stored in reservoirs of the Talent Irrigation District is 123 percent of the average and totals 76,200 acre feet compared with about 102,900 acre feet held a year ago.

STREAMFLOW

Spring and summer streamflow of the Umpqua River below Lemolo reservoir is forecast at 97 percent of the 15-year average (1948-62). Flow of the Clearwater above Trap Creek is expected to be 106 percent of the average.

In the Rogue River basin, flow of the Rogue above Prospect is forecast at 375,000 acre feet or 106 percent of the average for the April-September period. On downstream at Raygold the flow of the Rogue is forecast at 103 percent average.

The Applegate and Illinois Rivers are forecast at 127 and 121 percent respectively April through September.

Preliminary data from U. S. Geological Survey indicate flow of the Rogue from October 1 to date has been 73 percent of the 15-year average.

Report prepared by
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WATER SUPPLY OUTLOOK expressed as "Poor", "Fair", "Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Althouse Creek	Excellent	Excellent
Applegate River, Big	Excellent	Excellent
Applegate River, Little	Excellent	Excellent
Ashland Creek	Excellent	Excellent
Butte Creek, Little	Average	Average
Butte Creek, Big	Average	Average
Cow Creek	Excellent	Average
Deer Creek	Excellent	Average
Elk Creek	Excellent	Average
Emigrant Creek (abv. Res.)	Excellent	Average
Evans Creek	Excellent	Average
Gold Hill Irrigation Dist.	Average	Average
Grants Pass Irrig. Dist.	Average	Average
Grave Creek	Excellent	Average
Illinois River, East Fork	Excellent	Excellent
Illinois River, West Fork	Excellent	Excellent
Jump-off-Joe Creek	Excellent	Average
Neil Creek	Excellent	Excellent
Red Blanket Creek	Excellent	Average
Rogue River	Average	Average
Sucker Creek	Excellent	Excellent
Table Rock Irrig. Dist.	Average	Average
Thompson Creek	Excellent	Excellent
Wagner Creek	Excellent	Average
Williams Creek	Excellent	Excellent

RESERVOIR STORAGE (1,000 Ac. Ft.) February 1, 1966

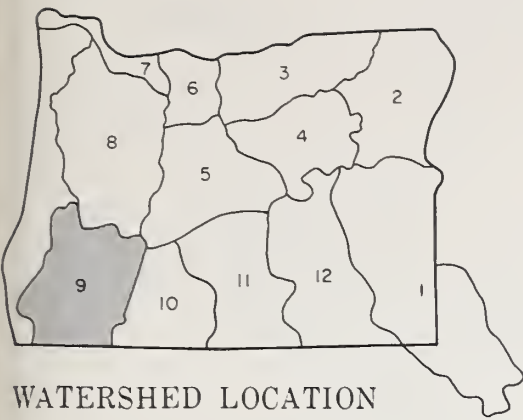
RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1948-62 AVERAGE
Emigrant Lake	39.0	22.6	26.2	19.8*
Fish Lake	7.8	7.5	8.2	5.1
Fourmile Lake	16.1	9.2	13.5	8.5
Howard Prairie	60.0	42.9	60.6	- -
Hyatt Prairie	16.1	10.7	16.1	7.1
*Average for years of record after reconstruction.				

STREAMFLOW FORECASTS^a(1,000 Ac. Ft.) as of February 1, 1966

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT. OF AVERAGE ⁱ
NO.	NAME				
3620	Applegate near Copper	180	April-Sept.	142	127
3145	Clearwater above Trap Creek ^d	80	April-Sept.	75	106
5045	Fourmile Lake net Inflow ^d	6.8	April-Sept.	6.6	103
		7.5	Feb.-Sept.	7.0	107
5140	Hyatt Reservoir net Inflow ^d	7.0	April-Sept.	6.4	109
3770	Illinois River at Kerby	420	March-July	348	121
		260	April-Sept.	212	123
3425	Little Butte, No. Fk. at Fish Lake nr. Lake Cr. ^d	*			
2415	Little Butte, S. Fork near Lake Creek	*			
	Note: Minimum flow will drop to 100 c.f.s. by *				
3280	Rogue above Prospect	315	April-July	295	107
		375	April-Sept.	355	106
3320	Rogue, South Fork near Prospect ^d	74	April-July	70	105
		85	April-Sept.	82	104
3350	Rogue below South Fork	645	April-July	611	106
		790	April-Sept.	754	105
3590	Rogue at Raygold near Central Point	875	April-July	837	104
		1035	April-Sept.	1001	103
3615	Rogue at Grants Pass	1025	April-Sept.	993	103
3135	Umpqua, No. blw. Lemolo Res. nr. Toketee Falls ^d	180	April-Sept.	186	97
	*No snow surveys at Fish Lake				

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

ROGUE, UMPQUA WATERSHEDS



10 0 10 20 30
SCALE IN MILES



LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry
- County Boundary
- ▲ Forecast Point
- Snow Course
- ⌋ Precipitation Gage

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
					LAST YEAR	1948-62 AVERAGE
NAME	ELEVATION					
Althouse	4530	1/28	42	18.5	11.3	4.7 ^h
Annie Spring	6018	1/28	92	32.1	48.2	29.4
Beaver Dam Creek	5100	1/28	34	11.1	9.9	- -
Big Red Mountain	6500	2/4	85	26.4	23.9	20.8 ^h
Billie Creek Divide	5300	1/31	50	15.4	19.2	16.7 ^h
Champion	4500	2/1	93	30.7	23.6	18.8
Cold Springs Camp	6100	1/24	73	20.8	32.0	- -
Deadwood Junction	4600	1/28	26	9.2	6.7	- -
Diamond Crater Summit	5800	1/26	81	25.6	36.8	- -
Diamond Lake	5315	1/26	63	20.7	21.6	16.7
Eden Valley Summit	2390	2/1	24	11.2	- -	- -
Fish Lake	4865	Not	surveyed			
Fourmile Lake	6000	c				
Grayback Peak	6000	2/1	97	30.1	23.0	17.9 ^h
Howard Prairie	4500	1/28	25	9.1	6.8	- -
Hyatt Prairie Reservoir	4900	1/28	27	8.8	6.6	6.6 ^h
King Mountain #1	4800	Not	surveyed			
King Mountain #2	3646	Not	surveyed			
King Mountain #3	2550	Not	surveyed			
King Mountain #4	1779	Not	surveyed			
Little Red Mountain	6500	2/3	82	25.4	20.1	15.1 ^h
North Umpqua	4215	1/26	47	16.3	16.4	11.7 ^h
Page Mountain	4045	1/28	36	16.0	5.7	4.0 ^h
Park Headquarters	6450	1/28	110	39.2	71.0	37.3
Red Butte #1	4560	Not	surveyed			
Red Butte #2	4000	1/28	36	14.4	6.0	- -
Red Butte #3	3500	1/28	30	12.6	T	- -
Red Butte #4	3000	1/28	19	9.0	0.0	- -
Red Butte #5	2500	1/28	0	0.0	0.0	- -
Red Butte #6	2000	1/28	0	0.0	0.0	- -
Seven Lakes #1	6800	1/28	99	37.3	59.0	36.9 ^h
Seven Lakes #2	6200	1/27	84	28.8	36.2	27.2 ^h
Silver Burn	3720	1/27	50	18.7	12.3	10.5
Siskiyou Summit	4630	1/28	34	13.4	6.8	6.8
South Fork Canal	3500	1/27	28	9.1	4.4	3.4
Trap Creek	3800	1/27	39	13.4	12.8	9.8 ^h
Whaleback	5140	1/31	87	30.4	- -	23.1 ^h
Windigo Pass	5800	1/28	92	31.1	45.3	29.4



WATER SUPPLY OUTLOOK KLAMATH WATERSHEDS OREGON

as of

FEBRUARY 1, 1966

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

Outlook for spring and summer water supplies in Klamath Basin is good at this midwinter date. Snowpacks are slightly above average, watershed soil moisture is about average and reservoired water supplies are good.

SNOW COVER

Water content of the mountain snowpack on February 1 is about 109 percent of the 15-year average (1948-62) and 76 percent of last year at this date. Low elevation snow in the valley edge is heavier this season than usual and is staying because of below average temperatures.

SOIL MOISTURE

Moisture in upper watershed soils under the snowpack is about average and some frost is in the soil at scattered sites.

RESERVOIR STORAGE

Water stored in Upper Klamath Lake is now 272,900 acre feet compared with 347,000 acre feet which is average. This figure will increase as snowmelt runoff begins.

Gerber reservoir holds 51,800 acre feet compared with the average of 30,500 acre feet and a total of 73,400 acre feet a year ago. Clear Lake contains 219,600 acre feet compared with 232,000 acre feet a year ago and the average storage of 188,400 acre feet. Inflow to these reservoirs will be somewhat below average this season.

STREAMFLOW

Streamflow next spring and summer into Upper Klamath Lake is forecast at 94 percent of the 15-year average (1948-62). Inflow to Gerber and Clear Lake reservoirs is forecast at 81 and 85 percent average for the February-June period.

Inflow to Upper Klamath Lake from October 1, 1965 to February 1, 1966 has been 94 percent of the average according to preliminary data furnished by the Pacific Power and Light Company, Portland, Oregon.

WATER SUPPLY OUTLOOK

expressed as "Poor", "Fair",
"Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Ft. Klamath Valley	Average	Average
Lost River (Clear Lake)	Average	Average
Lost River (Gerber)	Average	Average
Lost River (Willow Res.)	Average	Average
Sprague River	Average	Average
Upper Klamath Lake	Average	Average
Williamson River	Average	Average

RESERVOIR STORAGE (1,000 Ac. Ft.) February 1, 1966

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1948-62 AVERAGE
Clear Lake	440.2	219.6	232.1	188.4
Gerber	94.0	51.8	73.4	30.5
Upper Klamath Lake	584.0	272.9	558.4	347.1

STREAMFLOW FORECASTS^a(1,000 Ac. Ft.) as of February 1, 1966

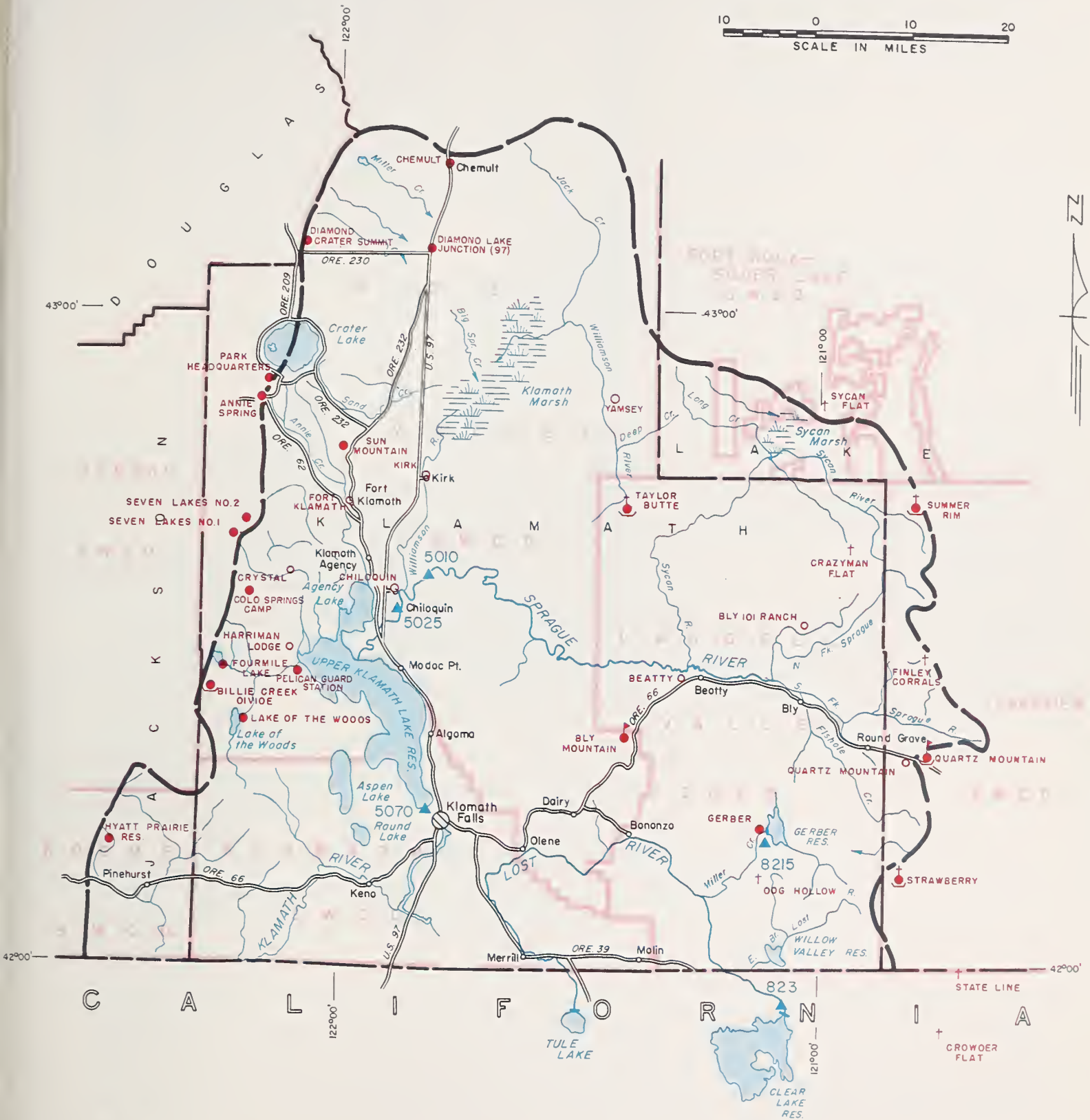
FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT. OF AVERAGE ⁱ
NO.	NAME				
823	Clear Lake Reservoir Inflow ^k	83	Feb.-June	98	85
8215	Gerber Reservoir Inflow ^k	39	Feb.-June	48	81
5010	Sprague near Chiloquin	350	Feb.-Sept.	390	90
		265	April-Sept.	289	92
5070	Upper Klamath Lake net Inflow ^k	900	Feb.-Sept.	1002	90
		600	April-Sept.	639	94
5025	Williamson below Sprague River	650	Feb.-Sept.	683	95
		475	April-Sept.	490	97

SOIL MOISTURE

STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
		DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
NAME	ELEVATION						
Bly Mountain	5090	42	14.0	c			

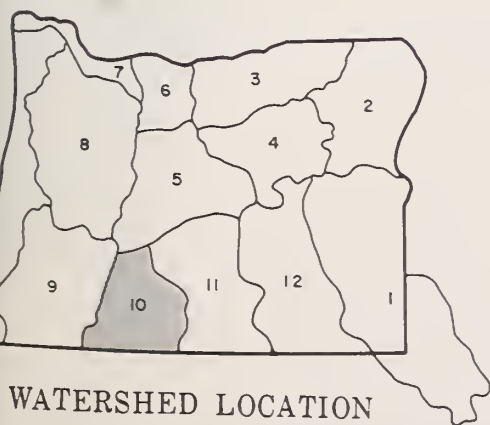
(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

KLAMATH WATERSHEDS



LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry
- County Boundary
- ▲ Forecast Point
- Snow Course
- + Aerial Snow Depth Gage
- COPCO Snow Station
- ▶ Soil Moisture Station
- ⌋ Precipitation Gage



Klamath Watersheds

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	ELEVATION				LAST YEAR	1948-62 AVERAGE
Annie Spring	6018	1/28	92	32.1	48.2	29.4
Beatty (PP&L)	4300	b				
Billie Creek Divide	5300	1/31	50	15.4	19.2	16.7 ^h
Bly Mountain	5090	Not surveyed				
Bly 101 Ranch (PP&L)	4800	1/31	9	3.0	2.6	1.8
Chemult	4760	1/29	34	12.3	12.5	9.1
Chiloquin (PP&L)	4187	1/31	8	3.2	0.9	2.2
Cold Springs Camp	6100	1/24	73	20.8	32.0	- -
Crazyman Flat ^e	6100	1/26	24	6.7	9.1	6.2 ^m
Crowder Flat ^e (Calif.)	5200	1/26	10	2.8	4.2	2.7 ^m
Crystal (PP&L)	4200	1/28	28	10.2	9.0	7.6
Diamond-Crater Summit	5800	1/26	81	25.6	36.8	- -
Diamond Lake Junction (97)	4600	1/25	25	7.5	6.0	- -
Dog Hollow ^e	4900	1/26	3	0.8	2.7	1.0 ^m
Finley Corrals ^e	6000	1/26	31	8.7	18.2	10.2 ^m
Fort Klamath (PP&L)	4150	1/31	18	5.1	4.5	4.1
Fourmile Lake	6000	c				
Gerber	4850	1/31	9	2.9	2.3	2.4 ^h
Harriman (PP&L)	4200	1/31	18	5.0	5.3	3.7
Hyatt Prairie Reservoir	4900	1/28	27	8.8	6.6	6.6
Kirk (PP&L)	4533	1/31	36	9.8	4.8	6.1
Lake of the Woods	4960	1/27	31	9.0	9.8	9.6
Park Headquarters	6450	1/28	110	39.2	71.0	37.3
Pelican Guard Station	4150	2/2	18	4.6	3.0	- -
Quartz Mountain	5320	1/28	23	6.5	6.6	5.6
Quartz Mountain (PP&L)	5504	1/28	24	7.1	7.5	5.3
Seven Lakes #1	6800	1/28	99	37.3	59.0	36.9 ^h
Seven Lakes #2	6200	1/27	84	28.8	36.2	27.2 ^h
State Line ^e (Calif.)	5750	1/26	26	7.3	9.9	6.0 ^m
Strawberry	5760	1/24	25	6.6	6.5	6.6 ^h
Summer Rim ^e	7200	1/26	40	11.2	- -	- -
Sun Mountain	5350	1/25	54	17.7	- -	18.4
Sycan Flat ^e	5500	1/26	21	5.9	7.6	5.6 ^m
Taylor Butte	5100	1/31	20	5.5	4.5	4.7 ^h
Yamsey (PP&L)	4600	b				

"The Conservation of Water begins with the Snow Survey"

WATER SUPPLY OUTLOOK LAKE COUNTY, GOOSE LAKE WATERSHEDS OREGON

as of

FEBRUARY 1, 1966

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

Outlook for spring and summer water supplies in Lake County is fairly good at this midwinter date. Mountain snows are about average, reservoired water supplies are excellent but moisture in the soils under the snowpack is below average.

SNOW COVER

Water content of the mountain snowpack is 101 percent of the 15-year average (1948-62) but is only 68 percent of the snow of a year ago. Much above average amounts of moisture are needed from the few remaining winter storms if this region is to have adequate water supplies this summer.

SOIL MOISTURE

Moisture in the soil mantle under the mountain snowpack is only 62 percent of capacity compared with 78 percent a year ago.

RESERVOIR STORAGE

Water stored in the Cottonwood and Drews Valley reservoirs is well above average. Drews reservoir now holds 41,300 acre feet compared with 66,200 acre feet and a 15-year average storage of 32,500 acre feet. Inflow to these reservoirs will be somewhat below average.

STREAMFLOW

Streamflow next spring and summer is forecast at 40,000 acre feet or 85 percent average (1948-62) into Drews reservoir for the March-July period. Lakeview Water Users Association should be well supplied.

Flow of Twentymile, Deep Creek and Honey Creek into Warner Valley for the March-June period are forecast at 70, 86, and 67 percent respectively. There will be some late season shortages in this valley.

Chewaucan River is forecast at 96 percent average for the March-June period and should furnish good water supplies.

WATER SUPPLY OUTLOOK

expressed as "Poor", "Fair",
"Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Chewaucan River	Average	Average
Crooked Creek	Average	Fair
Deep Creek	Average	Fair
Dry Creek	Average	Fair
East Side Goose Lake	Fair	Fair
Guano Lake	Average	Fair
Honey Creek	Fair	Fair
Lakeview Water Users Assn.	Average	Average
Rock Creek (Hart Mtn.)	Average	Fair
Silver-Buck Creeks	Average	Average
Summer Lake	Average	Average
Thomas Creek	Average	Fair
Twentymile Creek	Fair	Fair
Warner Lakes	Fair	Fair

RESERVOIR STORAGE (1,000 Ac. Ft.) February 1, 1966

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1948-62 AVERAGE
Cottonwood	8.7	b	5.6	1.4*
Drews	63.0	41.3	66.2	32.5
*Average for years of record after reconstruction.				

STREAMFLOW FORECASTS^a (1,000 Ac. Ft.) as of February 1, 1966

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE ⁱ
NO.	NAME				
3840	Chewaucan near Paisley	85	March-June	89	96
3715	Deep above Adel	67	March-June	78	86
3385	Drew Reservoir net Inflow	40	March-July	47	85
3785	Honey near Plush	12.0	March-June	18.0	67
3660	Twentymile near Adel	19.7	March-June	28	70

SOIL MOISTURE

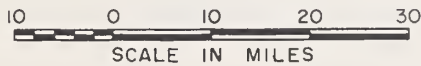
STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
		DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
NAME	ELEVATION						
Camas Creek	5720	42	14.5	1-27-66	11.4	13.0	12.7
Quartz Mountain	5320	48	15.3	1-28-66	7.0	10.4	9.0

SNOW

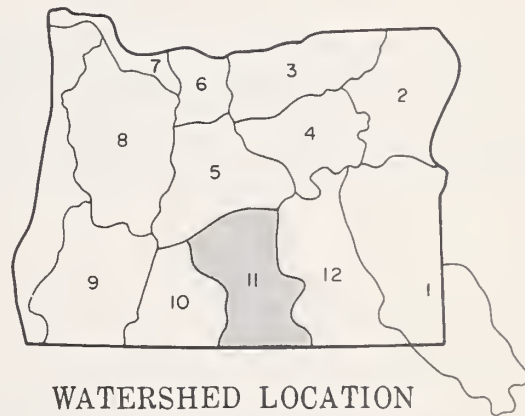
SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	ELEVATION				LAST YEAR	1948-62 AVERAGE
Bald Mountain (Nev.)	6720	c				
Bear Flat Meadow ^e	5900	1/25	22	6.2	9.1	5.2 ^m
Camas Creek	5720	1/27	24	6.8	9.5	7.9
Colvin Creek ^e	6550	1/25	16	4.5	- -	- -
Cox Flat ^e	5750	1/25	24	6.7	9.1	5.2 ^m
Crane Mountain ^e	6020	1/25	3	0.8	2.0	4.1 ^m
Crowder Flat ^e (Calif.)	5200	1/26	10	2.8	4.2	2.7 ^m
Dismal Swamp ^e (Calif.)	7000	1/25	33	9.2	15.6	8.2 ^m
Finley Corrals ^e	6000	1/26	31	8.7	18.2	10.2 ^m
Hart Mountain ^e	6350	1/25	4	1.1	2.0	0.9 ^m
Little Bally Mountain ^e (Nev.)	6600	1/25	4	1.1	3.1	- -
Mill Creek	6200	c				
Patton Meadows ^e	6800	1/25	36	10.1	19.0	- -
Quartz Mountain (PP&L)	5504	1/28	24	7.1	7.5	5.3
Quartz Mountain	5320	1/28	23	6.5	6.6	5.6
Sherman Valley ^e	6600	1/25	18	5.0	10.2	7.4 ^m
Silver Creek	4900	1/28	14	4.1	2.1	3.4 ^h
State Line ^e (Calif.)	5750	1/26	26	7.3	9.9	6.0 ^m
Strawberry	5760	1/24	25	6.6	6.5	6.6 ^h
Summer Rim ^e	7200	1/26	40	11.2	19.0	8.9 ^m
Sycan Flat ^e	5500	1/26	21	5.9	7.6	5.6 ^m

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

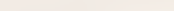
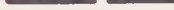
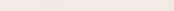







LAKE COUNTY, GOOSE LAKE WATERSHEDS



WATERSHED LOCATION



LEGEND

-  Watershed Boundary
-  Sub-watershed Boundary
-  Soil Conservation District Bdry
-  County Boundary
-  Forecast Point
-  Snow Course
-  Aerial Snow Depth Gage
-  COPCO Snow Station
-  Soil Moisture Station
-  Precipitation Gage



WATER SUPPLY OUTLOOK HARNEY BASIN WATERSHEDS OREGON

as of
FEBRUARY 1, 1966

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

Outlook for spring and summer water supplies in Harney County is mostly fair to poor at this early midwinter date. Precipitation and snowfall have been far below average and soil moisture in the upper watersheds under the snow-pack is correspondingly low.

SNOW COVER

Water Content of the mountain snowpack is only 65 percent of the February 1 average in the north half of the basin and 74 percent average in the south half. Present snow cover is only 40 to 50 percent of that of a year ago.

Remaining winter storms will have to produce much above average moisture if Harney Basin is to have average water supplies this spring and summer.

SOIL MOISTURE

Moisture in upper watershed soils under the snowpack is only 69 percent of the 15-year average (1948-62) while last year moisture was 96 percent of the average. Dry soils will absorb part of the earliest snowmelt runoff and will reduce the chances of filling important reservoirs.

STREAMFLOW

Streamflow next spring and summer is forecast at 50 percent average on the Silvies River, 60 percent average on Silver Creek, 73 percent average on the Blitzen and 83 percent average on Trout Creek. These flows will provide mostly fair to poor water supplies only, except for the Blitzen where the supply will be fair to average.

Report prepared by
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U. S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE
1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

WATER SUPPLY OUTLOOK

expressed as "Poor", "Fair",
"Average" or "Excellent"

RESERVOIR STORAGE (1,000 Ac. Ft.) February 1, 1966

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Catlow Valley	Average	Fair
Cow Creek	Fair	Poor
Donner und Blitzen River	Average	Fair
Mill-Coffeepot Creeks	Fair	Poor
Rattlesnake Creek	Fair	Poor
Silver Creek	Fair	Poor
Silvies River	Fair	Poor
Soldier-Prather Creek	Fair	Poor
Trout Creek	Fair	Poor
Whitehorse Creek	Fair	Poor

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1948-62 AVERAGE

STREAMFLOW FORECASTS^a(1,000 Ac. Ft.) as of February 1, 1966

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE ⁱ
NO.	NAME				
3960	Donner und Blitzen near Frenchglen	43	March-June	59	73
		45	April-Sept.	62	73
4030	Silver near Riley	13.3	April-July	22	60
3935	Silvies near Burns	70	March-June	116	60
		50	April-Sept.	99	50
4065	Trout near Denio	7.5	March-July	8.7	86
		7.0	April-Sept.	8.4	83

SOIL MOISTURE

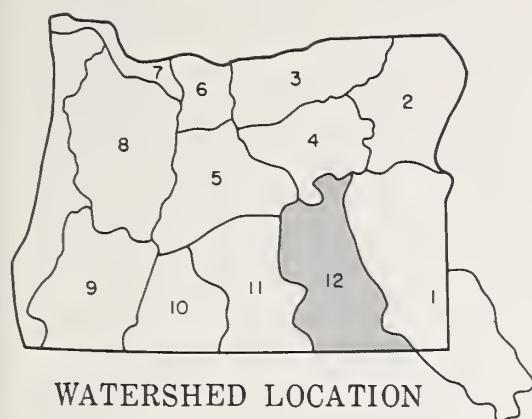
STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
		DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
NAME	ELEVATION						
Blue Mountain Springs	5900	42	16.9	1-27-66	6.8	13.0	7.2
Fish Creek	7900	48	15.0	c			
Folly Farm	4450	30	12.5	c			
Silvies	6900	48	16.4	c			
Snow Mountain	6300	48	16.7	1-28-66	12.0	16.3	12.2
Starr Ridge	5150	36	10.6	1-25-66	6.4	10.3	8.1
Stinking Water Summit	4800	48	21.9	11-19-65	21.4	21.3 ^f	20.8 ^f
Willow-Bald	5000	24	6.6	1-31-66	3.8	6.4	5.6

SNOW

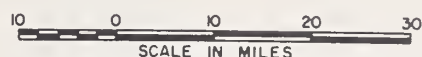
SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	ELEVATION				LAST YEAR	1948-62 AVERAGE
Blue Mountain Springs	5900	1/27	29	6.3	20.8	10.8
Buck Pasture ^e	5700	1/27	7	1.3	0.4	--
Buckskin Lake ^e	5200	1/27	4	0.8	0.0	--
Call Meadows ^e	5340	1/27	8	1.8	0.8	--
Crow Camp ^e	5500	1/27	5	1.2	0.6	--
Delintment Lake	5600	1/28	19	6.2	7.1	--
Denio Creek ^e	6000	1/27	4	0.8	0:0	--
Disaster Peak (Nev.)	6500	c				
Emigrant Butte	5000	1/31	10	2.1	3.1	--
Fish Creek ^e	7900	1/27	37	9.6	26.7	--
Hart Mountain ^e	6350	1/25	4	1.1	2.0	0.9 ^m
Idlewild Camp	5200	1/28	16	3.2	6.3	4.2 ^h
Izee Summit	5293	1/25	21	3.8	8.7	6.2 ^h
Lake Creek	5120	1/28	16	3.8	13.1	5.8 ^m
Oregon Canyon ^e	6950	1/27	6	1.1	2.1	--
Rock Spring	5100	1/28	16	3.5	5.9	4.2
Silvies ^e	6900	1/27	12	2.3	10.2	--
Snow Mountain	6300	1/28	27	6.9	16.3	--
Starr Ridge	5150	1/25	17	3.1	8.0	4.6 ^h
Stinking Water	4800	1/27	6	1.6	1.3	3.3 ^h
Trout Creek ^e	7800	1/27	7	1.8	5.6	--
"V" Lake ^e	6600	1/27	9	1.7	3.5	--

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

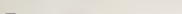

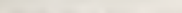


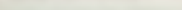


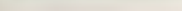
HARNEY BASIN WATERSHEDS

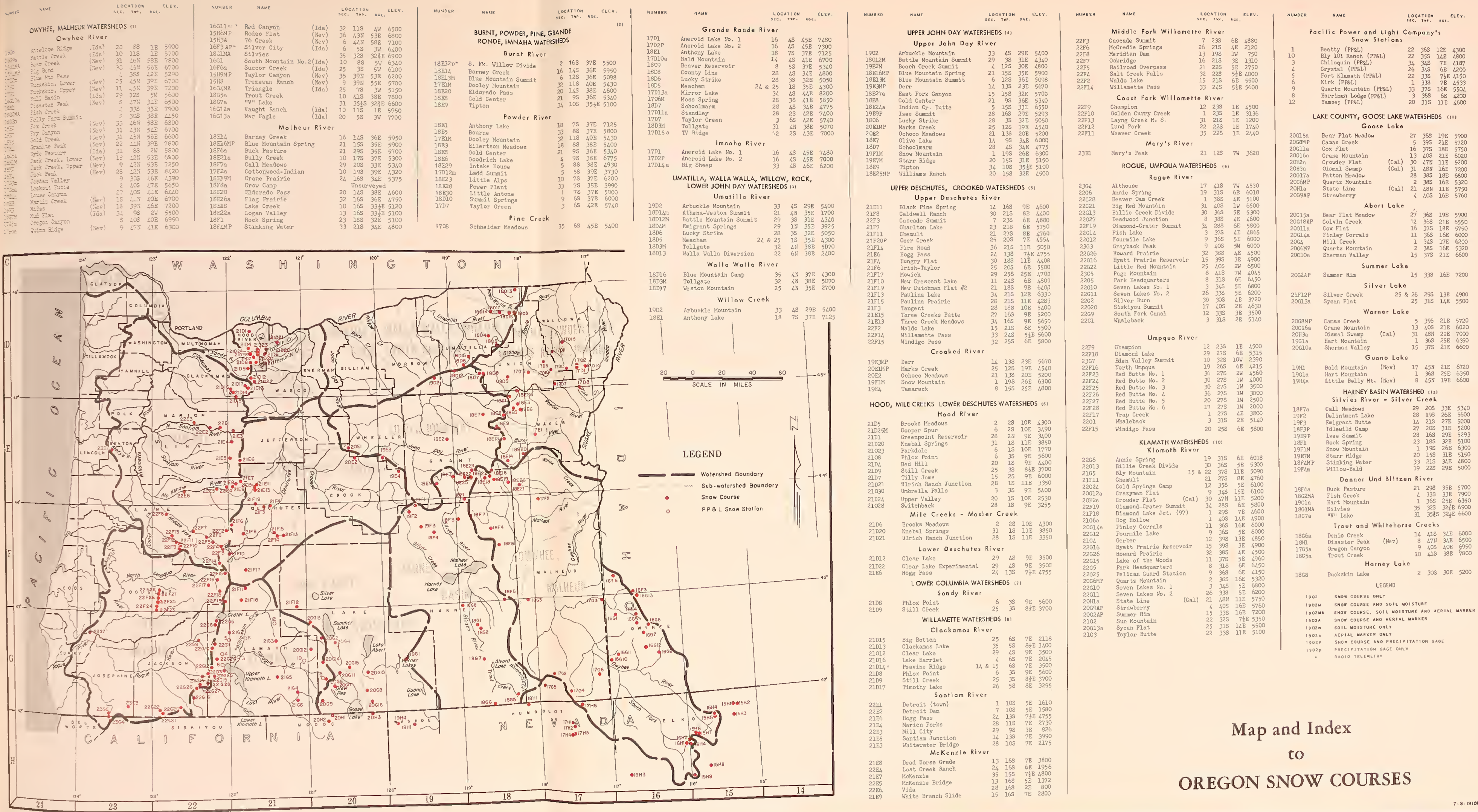


WATERSHED LOCATION



LEGEND

-  Watershed Boundary
-  Sub-watershed Boundary
-  Soil Conservation District Bdry.
-  County Boundary
-  Forecast Point
-  Snow Course
-  Aerial Snow Depth Gage
-  Soil Moisture Station
-  Precipitation Gage



Map and Index
to
OREGON SNOW COURSES

The Following Organizations Cooperate in the Oregon Snow Survey Work

STATE

- Idaho Cooperative Snow Surveys
- Nevada Cooperative Snow Surveys
- Oregon State University
- Oregon State Engineer and Corps of State Watermasters
- Oregon State Highway Engineers
- Soil and Water Conservation Districts of Oregon

COUNTY

- Douglas County Water Resources Survey

FEDERAL

- Department of Agriculture
 - Cooperative Extension Service
 - Forest Service
 - Soil Conservation Service
- Department of Commerce
 - Weather Bureau
- Department of the Interior
 - Bonneville Power Administration
 - Bureau of Land Management
 - Bureau of Reclamation
 - Fish and Wildlife Service
 - Geological Survey
 - National Park Service
- Department of National Defense
 - Corps of Army Engineers

PUBLIC UTILITIES

- Pacific Power and Light Company
- Portland General Electric Company
- California-Pacific Utilities Company

MUNICIPALITIES

- City of Baker
- City of La Grande
- City of The Dalles
- City of Walla Walla

IRRIGATION DISTRICTS

- Arnold Irrigation District
- Associated Ditch Companies
- Burnt River Irrigation District
- Central Oregon Irrigation District
- East Fork Irrigation District
- Grants Pass Irrigation District
- Hood River Irrigation District
- Jordan Valley Irrigation District
- Juniper Flat Irrigation District
- Lakeview Water Users, Incorporated
- Medford Irrigation District
- Middle Fork Irrigation District
- North Board of Control - Owyhee Project
- North Unit Irrigation District
- Ochoco Irrigation District
- Rogue River Valley Irrigation District
- South Board of Control - Owyhee Project
- Squaw Creek Irrigation District
- Talent Irrigation District
- Tumalo Project
- Vale-Oregon Irrigation District
- Warm Springs Irrigation District

PRIVATE ORGANIZATIONS

- Amalgamated Sugar Company
- The Crag Rats, Hood River, Oregon

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with the Snow Survey"*